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ABSTRACT

Recent efforts targeting teenage pregnancy in the United States have marked a renewed conviction to reduce the level of childbearing among adolescents. Some of the behavioral, psychosocial, and ethnographic studies that explore the underlying motivation to delay sex and to effectively use contraception are the focus of this literature review. Eschewing the more traditional, demographic or descriptive approach to teenage pregnancy, the goal of this study is to understand adolescents' motivation to prevent pregnancy; subsequently, it focuses on research that addresses the transition to first sex, sexual activity, and the use of contraception. A select number of studies on pregnancy resolution are also included as they are helpful for understanding the broader context of factors that may encourage/discourage adolescent sex and contraceptive behavior. The studies under review address individual-level factors, the influence of partners, peers, siblings and family processes, community and policy influences. Key findings are summarized, areas in need of further exploration are discussed, and a preliminary framework for a model integrating current knowledge is presented. Two sections, "Literature Cited" and "Literature Reviewed," contain approximately 267 references. An appendix describes and compares 19 models for understanding adolescent pregnancy. (EMK)

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UNDERSTANDING ADOLESCENTS' MOTIVATION TO PREVENT PREGNANCY: A LITERATURE REVIEW

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UNDERSTANDING ADOLESCENTS' MOTIVATION TO PREVENT PREGNANCY: A PRELIMINARY REVIEW OF THE LITERATURE

Barbara W. Sugland, Kathleen Wilder, and Anita Chandra

I. INTRODUCTION

Pregnancy during adolescence remains a topic of heated scientific and political debate. Recent national-level efforts, such as the National Campaign against Teen Pregnancy and welfare reform policies, all mark a renewed conviction to reduce the level of unintended pregnancy and childbearing among adolescents in the United States. Indeed, there is general agreement that a reduction in the number of pregnancies and births to teens would be a desirable goal for the nation at large. Roughly one million adolescents become pregnant each year, or approximately one-fifth of the sexually experienced female population 15 to 19 years of age (Alan Guttmacher Institute, 1994). The fact that the majority of these pregnancies (85 percent) are unintended, and a sizeable proportion end in an unintended birth, offers additional reasons for renewed and vigorous attention.

Although there is agreement that reducing the number of teen pregnancies is a worthwhile national endeavor, there is less agreement as to the most effective means to achieving that end. This disagreement is due, in part, to a limited understanding of what truly motivates adolescent sexual and fertility-related behavior. In fact, the vast majority of prior and current research on adolescent pregnancy has been largely atheoretical and descriptive. Studies exploring the determinants of adolescent pregnancy and early childbearing tend to explore a finite set of factors hypothesized to influence adolescent sexual and contraceptive behavior, without a broader theoretical framework to guide the scientific inquiry. It is not surprising, therefore, that a comprehensive framework for understanding adolescent motivation for sexual and fertility-related behavior remains largely unformulated.

To address the specific need for a better understanding of adolescents' motivation to prevent pregnancy, Child Trends has recently begun a study, funded by the Office of Population Affairs, that

combines qualitative methods (e.g., focus groups and concept mapping groups) with traditional survey and quantitative methodologies. The goal of this endeavor is to use information obtained from youth directly to develop a framework that outlines the various aspects of adolescents' lives that motivate teens to prevent pregnancy. The framework will be used to develop a set of survey items, appropriate for demographic and fertility surveys, measuring aspects central to the decision making process of youth pregnancy risk- taking behavior.

The substantive aims of the project are:

- To document youth perceptions about the factors influencing the motivation of teens to prevent pregnancy (*focus groups)*;
- To document how youth conceptualize the decision making process of teens to engage/not engage in pregnancy-risk taking behavior (*concept mapping groups)*;
- To develop a set of internally consistent groupings of survey items concerning the motivation to prevent pregnancy among youth based on findings from aims #1 and #2 above, and;
- To assess the association between newly developed items with youth reports of pregnancy risk-taking behaviors.

As a first step in this endeavor, we have conducted a review of scientific research that specifically addresses adolescent motivation to delay/avoid sex and to effectively use contraception. Attention was given to studies developing or testing a specific theoretical framework for adolescent sexual and contraceptive behavior. This paper briefly highlights key findings from that review. Appendix A provides an overview of the theories we identified.

We separate studies on teen sexual and contraceptive behavior into three basic groups: 1) Studies exploring individual and psychosocial factors, such as teen perceptions and attitudes about sex, contraception and pregnancy; 2) Work that examines the influence of peers, siblings, and family-process measures on teen sex and contraceptive behavior; 3) Theories that address the impact of community opportunities and social policies on adolescent sexual and contraceptive behavior. We identify the limitations of and gaps in current research, and use this information to pose a series of questions that will guide subsequent phases of the

project. As the objective of this study is to develop a comprehensive conceptual framework for understanding and exploring adolescent motivation for sexual and contraceptive behavior, we conclude this report with an illustration of a preliminary conceptual model. This model augments individual and psychosocial aspects of existing theories with background, sociocultural and social structural elements. This enhanced framework takes into account factors at each level and the relationship of factors at various levels to one another. The objective is to offer a more holistic approach for understanding the complexity of adolescent sexual behavior and the factors that promote teens' pregnancy prevention efforts.

Before presenting our summary, two caveats about our work should be noted. First, we acknowledge that this report may overlap other reviews on teenage childbearing and pregnancy prevention (Moore, Miller, et al., 1995; Moore, Sugland, et al., 1995; Miller et al., 1992). Unlike other reviews, the primary focus of this report is on behavioral, psychosocial, and ethnographic studies that explore the underlying motivation to delay sex and to effectively use contraception. Thus, our examination generally excludes studies taking the more traditional, demographic or descriptive approach to teenage pregnancy.

Second, as the goal of this study is to understand adolescents' motivation to prevent pregnancy, we limit our assessment to studies that primarily address the transition to first sex, sexual activity, and the use of contraception. We include a select number of studies on pregnancy resolution as they are helpful for understanding the broader context of factors that may encourage/discourage adolescent sex and contraceptive behavior. Summaries of the literature on the transition to first birth, or on the consequences of childbearing are not presented in this report.

II. Review of Studies on Adolescent Motivation to Prevent Pregnancy

Transition to First Sex & Sexual Activity

Preventing pregnancy is not simply one behavior, but rather the result of a decision making process regarding several preventive activities -- whether or not to have sex, whether or not to use contraception, whether or not to use an effective method of contraception, and whether to use that method of contraception properly and consistently. The first and most effective way to prevent pregnancy is, quite obviously, to delay or abstain from sexual intercourse. Thus, understanding adolescents' propensity to delay the onset of first sex is key to a review of the literature on theories of motivation.

Unfortunately, most studies addressing adolescent sexual behavior rarely provide a theoretical framework for understanding what motivates a teen's transition to initial coitus. Udry and Campbell (1994) use three perspectives to organize the scientific evidence regarding first sex during adolescence. These perspectives include the sociological, the biological and the developmental (psychological). Udry and Campbell assert that almost all of the available research is chiefly guided by sociological theory. Our review indicates that, of the small number of theoretical studies on adolescent sex, the vast majority take an even more limited approach than this. Studies generally focus on one particular factor (e.g., attitudes about gender roles) or a constellation of factors (e.g., behavior problems) that are hypothesized to influence adolescents' sexual behavior. In the following sections we describe these key areas identified as contributing to adolescents' motivation to engage in sexual behavior, and highlight studies that employ a specific theoretical framework to explore adolescent sexual behavior.

Studies Addressing Individual-Level Factors

Perceptions and Attitudes About Sex and Pregnancy

The opinions teens hold about sex and pregnancy, and the potential impact of sex and pregnancy on their lives, significantly influence the probability of engaging/not engaging in sexual intercourse. Several

theoretical models have been proposed to explain the link between teen attitudes and sexual behavior. For instance, Keith et al. (1991) use the Health Belief Model[1] to explore the determinants of sexual activity among black female adolescents. Although the authors did not find evidence in support of Health Belief Model, the study helped to identify variables relevant to sexual activity among this population. For example, the church and the presence of a father are associated with not being sexually active. More career and academically motivated adolescents tend to not be sexually active. In addition, the authors find that female adolescents least likely to be sexually active are less approving of premarital sex in general. The sample consists of black adolescent females , ages 13 to 17 years, who attend a school-based health clinic.

Other studies exploring attitudinal predictors of sexual activity also show a positive relationship between permissiveness about sex and the onset of intercourse and continued sexual activity (Herold, 1980; McAnarney and Schreider, 1984). Specific conceptual domains, such as sexual liberalism, have been shown to be reliable predictors of sexual activity across a variety of race/ethnic groups (Cvetkovitch and Grote, 1981). However, the extent to which individual attitudes play a dominant role in shaping sexual behavior may be s function of age and psychosocial development of the adolescent. For instance, Gibson and Kempf (1990) explore the role of attitudes in predicting sexual activity of Hispanic adolescent females from seven junior and senior high schools in New York City in the mid-1980s. Participants were categorized into two age groups -- 12 to 15 years and 16 to 18 years -- roughly corresponding to junior and senior high school age. Two separate age groups were used to isolate age effects on the transition to first sex. The purpose of the study was to examine the ability of three conceptual domains to discriminate between virgin and nonvirgin status. The domains include: a) attitude toward premarital sex and sexual liberalism; b) perception of

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[1] The Health Belief Model (Rosenstock, 1974, 1977), used in the context of exploring contraceptive use, presumes that individual behavior is determined by: a) the perceived threat of pregnancy (including the perceived probability of pregnancy if one has sex and the perceived consequences of pregnancy); b) modifying and enabling factors (e.g., psychological factors, attitudes, and interpersonal factors); and 3) probability of contraceptive use (which involves both benefits of and barriers to contraception).

friends' attitudes and behaviors regarding sexuality and contraception, and; c) achievement orientation. Among younger adolescents, nonvirgin status is most strongly influenced by the teen's perceptions of her peer group followed by her own attitudes toward sexuality and her achievement orientation. Among older teens, however, attitude toward premarital sex and sexual liberalism was most discriminant of nonvirginity status.

While the above studies indicate the importance of attitudes about sex and liberalism on a teen's own sexual activity, they fail to illustrate the underlying rationale for such attitudes. That is, they do not examine the psychosocial or contextual aspects of the adolescent's life that may be contributing to attitudes that are supportive of early sex. One such characteristic, self-esteem, has been proposed as a factor contributing to early onset of sexual activity. It has been argued that adolescents with a poor self-concept may seek sexual activity and pregnancy as a way of bolstering self-esteem and identity (Kissman, 1990 cited in Robinson and Frank, 1994).

While the link between self-concept and sexual activity seems logical, research in this area is inconclusive. Dilorio and Riley (1988) show no relationship between diminished self-concept and pregnancy, and McCullough and Scherman (1991) find teen mothers do not present a negative sense of self (cited in Robinson and Frank, 1994). Other studies (described later in this report), however, assert that males often confirm their masculinity through sexual activity and fathering a child (Anderson, 1990; Stern, 19994; Marsiglio, 1993). Work by Robinson and Frank (1994) corroborates this relationship. Specifically, they examine self-esteem in relation to sexual activity, pregnancy, and fatherhood status. Their analyses of 313 racially diverse adolescents (141 males, 172 females) reveal no gender differences in self-esteem and no differences in self-concept by ever pregnancy status. However, males who had fathered a child show a lower sense of self than nonfathers.

Perceptions and Attitudes About Gender Roles and Couple Dynamics

Studies show that teens' attitudes about gender roles are significantly associated with their sexual

behavior. Work by Foshee and Bauman (1992) shows a positive relationship between strong female gender stereotypes (e.g., "most women can't take care of themselves without help from men") and sexual experience among adolescent females. They conclude that female adolescents who believe in such stereotypes might be more submissive to male sexual advances than their peers who do not support the notion of such traditional behaviors among women.

Work by Pleck et al. (1993) also suggests a link between gender role stereotypes and male adolescent sexual behavior. However, in this study, it is stereotypes about males and not females that affect male sexual behavior. Pleck and colleagues report that a young male's ideology of male gender behavior is related to a broad range of issues in heterosexual relationships. Traditional notions about male status and masculinity such as, "it is essential for a guy to get respect from others" or "I don't think a husband should have to do housework", are associated with having more sexual partners and with a less close relationship with the current sexual partner. The investigators conclude that males with traditional attitudes have more sexual partners, use condoms less and have less favorable attitudes toward condoms, therefore leading to a greater likelihood of pregnancy among their partners.

Anderson (1990) provides an illustrative example of normative expectations for sexual conduct among African American urban males. Male sexual conduct is shown to be generally exploitative and not characterized by taking responsibility for one's actions (e.g., using contraception or supporting a pregnant partner), particularly when there are few educational or employment prospects in the teen's community. For instance, in his book Street Wise, Anderson portrays the sexual behavior of adolescent and young adult African-American males as an integral part of the contest between young males and their female counterparts. Specifically, sex is an important symbol of social status among the male peer group, which is taken quite seriously as a measure of the young man's self-worth. Sexual conquests represent another point scored in the game of "getting over" on young women's sexual defenses. Young women, on the other hand, tend to view the encounter as a way of bargaining for the young man's attention. In accepting his

advances, she may think she is maneuvering him toward a more committed relationship. Likewise, she feels that by getting pregnant, he may feel an obligation to marry her and provide a more stable and loving relationship.

Gilmore, DeLamater, and Wagstaff (1995) support Anderson's notion of a sexual script in the sexual-decision making of adolescent black males. In a series of focus groups with black males between the ages of 15 and 19 years , the authors ask group participants to comment on a series of questions pertaining to beliefs and behaviors about sex and contraception. Young men describe the need to be "running the game", or to maintain control in their relationships. This generally involves sweet talking or promising to take care of the girl or to buy her things. Young men believe that this is not only what young women want to hear, but that failure to say such things will lead to rejection as a sexual partner. As two participants described: Participant A: "I've had this girl over my house, but I can't get her to have to sex with me yet". Participant B: "You know why, cause you ain't got no game".

Similar interpersonal dynamics have been observed among low-income white urban youth. Stern (1994) conducted focus groups and personal interviews with white male and female adolescents in a predominantly white working class neighborhood in Philadelphia. She finds the issue of control a central theme in sexual relations among her study population. Specifically, control was viewed primarily as a means to: 1) maintaining power in a relationship, and; 2) getting respect from peers. Young females would often get pregnant to "hold" their boyfriends or to get revenge for infidelity, while young males often impregnated their partners to keep them from being with other males. Peer pressure to demonstrate one's manhood often involved being in control of their female partner and demonstrating that control in front of other males. For instance, young males would give instructions to females about what to wear and how to walk so as to minimize the girl's attractiveness and availability to other males. Participants described that such "talk" among white males was common in public, but private interactions were characterized as respectful and affectionate.

Gender roles, as those described above, clearly have a significant impact on how male and female adolescents relate to one another within a couple relationship. Studies show that males or females with more traditional attitudes towards gender roles, may be less likely to discuss issues of sex and contraception, or less able or willing to negotiate their own best interests when difficult or potentially dangerous interpersonal situations arise. With few exceptions, studies exploring couple relationships generally describe the correlation between the age of first dating, stability of the dating relationship, and the timing of first sex (Thornton, 1990; Miller et al., 1994). Specifically, teens who begin dating at early ages tend to develop steady relationships soon and continue to date more often. Both the timing of first dating experience and the development of serious dating relationships are strongly related to age of first sex, the number of sexual partners, and the frequency of intercourse in the later teenage years.

With few exceptions, studies tend not to discuss the interpersonal dynamics of couple relationships, how traditional gender roles or norms about gender roles influence the manner in which teens communicate about sex, the level of dominance of one partner or the other in the relationship, and the influence this dynamic may have on the transition to first sex.

A better understanding of couple dynamics may be critical for exploring adolescent motivation to avoid or delay sex, given the fact that early sexual experiences often are unwanted, and pressure and coercion frequently are involved (Moore et al., 1989). The number of empirical studies focusing on the connection between early unwanted sexual experiences, sexual abuse, and adolescent pregnancy has increased in recent years. Several mechanisms through which sexual abuse could contribute to adolescent pregnancy (aside from being the result of the sexual encounter) have been suggested (Boyer and Fine, 1992). These include a planned pregnancy to escape an abusive situation, family dynamics reflecting incestuous role patterns, and sexual socialization that emphasizes self-worth based on sexuality. Sexually abused young females are also much more likely to report "survival sexual experiences" in which sex is exchanged for money, a place to stay, or for drugs or alcohol. They are more likely to self-report school related behavior problems, to have

older sexual partners, and to have used drugs or alcohol at first intercourse (Boyer and Fine, 1992).

Adolescent Cognitive Processes and the Ability to Use Rational Decision-Making Skills

Other researchers have questioned the basic premise that adolescent sexual behavior is truly "rational" (Lowenstein and Furstenberg , 1991). Indeed, motivation to prevent pregnancy implies some type of rationale or specific reason for acting in a manner that affects one's risk for a pregnancy to occur. To address that premise, Lowenstein and Furstenberg tested three distinct theoretical possibilities within a decision-making framework. First, teenagers may have difficulty making rational decisions in general whether the issue is sex or not. Second, sexual behavior is a domain which is often characterized by irrationality in adolescents and adults alike. Third, adolescents may discount the consequences of using contraception (e.g., pregnancy) relative to the costs of contracepting (e.g., embarrassment) because these consequences are delayed and intangible. Findings show that younger teens are less deliberative about sexual decisions than older teens and that sex is frequently characterized by impulsive behavior inconsistent with views on the appropriateness of that behavior. This study does not compare teen behavior with that of adults and it does not compare decision making about sex with decision making about other topics. Thus, whether younger teens do act irrationally or whether it is the act of sex itself which evokes irrational behavior cannot be confirmed at this point. Further research is needed to distinguish which of these explanations may be the most plausible.

Various studies support the notion that sexual behavior may not be rational. In a focus group discussion about sex, pregnancy and contraception, teens report that their first sexual experience is often unexpected, and that to plan first sex means one has to acknowledge the possibility of becoming sexually active (Kisker, 1985). This dissonance between a teen's attitudes regarding a behavior and their actual behavior is addressed further by other researchers (Jorgensen and Sonstegard, 1984; DeLamater, 1983; DuRant, 1989).

For example, in an empirical test of Fishbein's model of behavior prediction[2] (Fishbein, 1972), Jorgensen and Sonstegard (1984) find no significant relationship between the specific components of Fishbein's model (e.g., adolescents' attitudes about sex, the normative beliefs about sex, and motivation to comply with those beliefs) and sexual activity. They suggest two possible reasons for the lack of association observed. The first is that adolescence is characterized by a struggle to achieve cognitive consistency between one's sexual attitudes and normative beliefs and one's actual sexual behavior. It is reasonable to presume that as adolescents' attitudes, norms and sexual behavior become less dissonant (either by modifying attitudes in a more permissive direction or by making behavior more conservative), the relationship between attitudes and behavior may become stronger. The second reason may be a reflection of the sporadic nature of intercourse during adolescence. That is, teens often view sexual intercourse as unplanned (Kisker, 1985). If such spontaneity is an accurate representation of the adolescent's experience, it would prove difficult to develop any type of predictive model of sexual behavior.

Studies Exploring the Influence of Peers, Siblings, and Family Processes

Peer & Sibling Influences

Data provide strong support that peers and siblings have a significant effect on teen sexual behavior. Both peers and older siblings can be powerful role models and confidantes, particularly in situations where relationships with parents are poor or where family conflict is high. Studies by Benda and DiBlasio (1991) and DiBlasio and Benda (1992) find that differential peer association (i.e. having a best friend who was sexually active) is most strongly correlated with frequency of sexual intercourse for both male and female adolescents. Whitbeck et al. (1993a) and Gibson et al. (1990) also show a strong influence of perceptions

[2]This model later developed into the Theory of Reasoned Action (Ajzen and Fishbein, 1980) which asserts that a person's behavior is best predicted by his or her intention to engage in the given action. That behavior is determined by the interaction of an individual's attitude toward the behavior and his or her perceptions of what others' expectations are regarding that behavior.

of friends' sexual behavior on adolescent girls' own sexual activity.

Even perceptions of popularity of peers/best friends may significantly influence teen sexual behavior. Newcomer et al. (1983) explore three specific hypotheses pertaining to popularity among adolescents: 1) Is popularity associated with increased sexual experience during adolescence?; 2) Are there gender differences in popularity, and do these differences correspond to different levels and types of sexual behavior?; and 3) Are popular teens perceived to be more sexually active regardless of actual sexual behavior? The authors find some evidence to suggest a relationship between popularity with opposite sex peers and sexual experience for white teens. Specifically, white males and white females who are more popular with members of the opposite sex are more likely to have had sex. Further, white teens who are more popular with the opposite sex are also more likely to have engaged in a greater number of non-coital sexual behaviors. Support for this trend among black adolescents does not emerge. In fact, black females who are most popular with their same sex peers are actually less sexually experienced than those with fewer "best friends." However, it is difficult to determine a causal direction from these data.

Sibling behavior and attitudes also contribute to sexual and pregnancy risk-taking among adolescents. Using data from the ADSEX study, Rodgers and Rowe (1988) find that younger siblings are more likely to be sexually active at any given age than older siblings were at the same age. This sibling difference appears to be larger for same than opposite sex sibling pairs, and stronger for whites than for blacks. ADSEX is a longitudinal survey of male and female junior high school students enrolled in sample schools in a medium-size city in the Southeastern U.S. in the late 1980s (Udry and Billy, 1987).

The influences of both older sisters and friends on adolescent girls' sexual attitudes and behaviors has been investigated in a series of recent cross-sectional studies (East, 1994; East et al., 1992; East et al., 1993). These studies generally find that having friends and sisters who are perceived to be sexually active is related to females' permissive attitudes and a younger age of first sexual intercourse. However, having an older sister who has had a child as an adolescent has a stronger positive effect on the younger sisters'

permissive attitudes and sexual experience than the youth's perceptions about her older sisters' sexual status. These results suggest that girlfriend and sister influences work together to affect girls' sexual attitudes and behavior.

Family-Level Influences

Teens' propensity for sexual and contraceptive behavior is well grounded in values and beliefs about sexuality and family formation which are learned very early in life within the context of the family. Understanding the various ways in which families influence an adolescent's motivation to delay initial sex, and encourage or maintain that motivation is important. Two ways in particular that families affect the sexual and fertility behavior of teens is through the manner in which values and beliefs are transmitted. The research in this field can be divided into the areas of parent-teen communication and parent-teen relationships.

The topic most often addressed when discussing family influences and pregnancy among teens is that of the role of parent-teen communication. Findings in this area are inconsistent, making it difficult to construct a coherent framework for understanding the influence of parent-teen communication on teen sexual behavior. Inconsistencies are due to several substantive and methodological complexities ranging from variations in how parent-teen communication is measured (e.g., frequency vs. content vs. quality of communication) to the type of data used (e.g., cross-sectional vs. longitudinal) and the ability to assess temporal order of events. That is, studies are unable to distinguish whether frequency of communication or the content of communication is a result of the fact that parents have a suspicion or a knowledge of the teen's sexual involvement and already perceive their son or daughter to be at risk.

The most conclusive findings can be found in two areas. First, adolescents are more likely to communicate about sexual issues with their mothers than with their fathers (Jaccard et al., 1993; Noller et al., 1990; Nolin et al.,1992; Miller et al., 1995). Second, parents' values about and attitudes toward sexuality are both important mediating factors between parent-teen communication and adolescent sexual behavior

(Jaccard et al., 1991; Mueller et al., 1990).

The ability of parents and teens to communicate with one another about sex often stems from the quality of the relationship that parents and adolescents already have with one another. Indeed, one would presume that adolescents who have a strong and supportive relationship with their parents will be more likely to discuss important decisions with their parents around issues of sex and contraception than teens who characterize their parental relationship as distant or unsupportive. In addition, a supportive parent-teen relationship may act as a buffer or provide important monitoring against other risk-taking behaviors, such as alcohol or drug use. These behaviors are shown to significantly increase the likelihood of early and unprotected sex.

Studies also indicate that parents' attitudes about sex and values about teen sexual behavior are associated with teen sexual behavior and may be key to whether parents directly communicate those values to their adolescent children. However, family communication about sex per se does not necessarily have a direct impact on adolescent sexual behavior. Hovell and colleagues (1994) find that mothers' attitudes about sex, family rules and strictness are related to teens' sexual behavior. Having a mother with traditional attitudes (i.e. the child should wait until marriage to have sex) or who is more strict about complying with parental rules is negatively related to that teen's sexual behavior. Conversely, teens whose mothers had more favorable attitudes toward teen sex, whose parents are least strict, and who believe their mothers had sex before marriage have higher levels of sexual activity. The study also shows that family discussion of sexual issues is relatively infrequent, is accompanied by high levels of discomfort and is not related to adolescent sexual behavior. The sample includes 14 to 16 year- old adolescents from California, more than half of whom are Latino. The influence of maternal attitudes on adolescent sexual behavior is similar for Latino and Anglo adolescents, although Latino females have lower levels of sexual experience than teens from other racial/ethnic and gender groups.

In other studies, parental support has been shown to have substantial indirect effects on sexual

behavior. Specifically, parental support reduces the number of depressive symptoms and alcohol use, both of which are significantly related to sexual experience among adolescents (Whitbeck et al., 1992). Strong gender differences in the ways that parent-child relationships influence teen sexual behavior are observed, however. In particular, diminished parental support is related to greater depression and alcohol use for both male and female teens. However, the association between depressive symptoms and sexual activity is much stronger for female adolescents than for their male counterparts. On the other hand, the correlation between alcohol use and early sexual activity is greater for teen males than teen females. In subsequent longitudinal analyses of females in the same sample, Whitbeck et al. (1993a) find that the impact of parental warmth/support on the daughters' depressive symptoms is related to daughters' concurrent sexual attitudes and sexual behavior one year later.

The lack of a positive parent-teen relationship may also contribute to a reliance on other types of relationships (e.g., peers) for support and interaction. In fact, the influence of peers appears to increase for both male and female adolescents when relationships with parents are poor or distant. This finding is supported by other explorations of pre-adolescent and adolescent behavior in which an association with sexually active peers is seen as reflecting a deficit or void left by a weak bond or relationship with one's parents (Benda and DeBlasio, 1991).

Studies on Community and Policy Influences

Community Context

Several studies have explored the link between the context of the community in which the teens live and the teens' sexual and fertility behavior. Work in this area encompasses two main areas: a) studies that address the lack of economic, social and health resources or changes in the availability of such resources on adolescent sexual and contraceptive behavior, and; b) work that focusses on community norms and values about appropriate sexual behavior, and the monitoring of those norms among community members. The

underlying premise of the first set of studies is that limited economic, educational, or social opportunities offer few positive and viable alternatives to early childbearing for young residents. Conversely, youth with a more promising future, or greater access to opportunities for career advancement, will be more motivated to avoid pregnancy and parenthood. This rationale, often termed the "Opportunity Cost" hypothesis, has been offered as an explanation for understanding racial and socioeconomic disparities in rates of adolescent pregnancy and childbearing.

Although the Opportunity Cost hypothesis is generally proposed as an explanation for adolescent sexual and fertility behavior, the empirical evidence in support of this theory is limited and inconclusive. For example, some studies explore the link between perceptions of economic opportunity and transition to fertility-related behavior. Work by Lauritsen (1994) and Sugland (1992) use the discrepancy between youth's aspired and expected achievements to capture perceived obstacles to educational achievement as a proxy for perceptions of opportunity. This discrepancy is then used to explore racial and gender differences in adolescent sexual and fertility behavior respectively. Both studies find significant, but conflicting impacts on adolescent fertility behavior. Lauritsen reports perceived inability to achieve goals explains variations in sexual behavior of black females, not whites; Sugland shows significant impacts on transition to first birth for whites, but not non-whites.

Others hypothesize that some teens, particularly low-income and ethnic minority teens, engage in sex or seek parenthood as a way of becoming an adult, because more mainstream behaviors (e.g., school completion, employment, college attendance) are not available to them. Qualitative work by Peak (1993) suggests that while adolescents view sexual activity and having a child as adult behaviors, these activities are seen to most indicative of becoming adult. African- American male and females from Baltimore ranging from 10 to 19 years of age participated in a series of concept mapping groups, where they were asked to describe activities or behaviors that symbolize becoming an adult. Group participants were then asked to

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rate each activity on a scale from 1 to 5 in terms of its importance to becoming an adult, and to group activities together in ways that made sense to them or had similar meaning. Items teens consistently noted and rated highly as indicative of adulthood included, having a job, having money to buy things you need or want, being educated, including both formal education (high school or post-secondary) and "street wise" education, owning your own home and having a family. Sex and parenthood were explicitly mentioned, but rated as less important to the notion of being an adult. While both sexual activity and having a child are implied in the notion of having a family, teens expressed the rewarding or stressful features of family life in their discussions regarding adulthood, such as the financial and emotional responsibilities of taking care of other people, as well as the rewards of raising children and having a spouse.

Studies exploring the Opportunity Cost hypothesis also examine contextual factors as a proxy for economic and social opportunities. For instance, recent studies using the National Survey of Family Growth (NSFG) conclude that neighborhood characteristics (e.g., proportion of women employed full time, proportion of adults relative to teens) have an important effect on teen sexual intercourse (Brewster, 1994; Brewster et al., 1993; Billy et al., 1994). Specifically, the median housing value (an indicator of community socioeconomic status) has a negative relationship with the likelihood of premarital sexual involvement among white teens. Also, the extent of youth alienation (the degree to which school-aged youth are not in school and/or in the labor force) in the community increases the likelihood of sexual activity among black youth. Furthermore, because white and black neighborhoods tend to be substantially different, controlling for the neighborhood context reduces much of the racial difference in the age of first sex. However, these same investigators show that while community characteristics generally predict teen sexual behavior, the level of prediction is significantly smaller for the sexual behavior of black teens than for the sexual behavior of white teens (Billy et al., 1994).

Other studies show less conclusive evidence that economic factors at the neighborhood level impact on adolescent fertility. For instance, Ku et al. (1993a) find that young males in areas with high

unemployment have more sexual partners and are more likely to have made someone pregnant or to have fathered a child. On the other hand, teens from higher income families and teens who are employed also have more sexual partners and more frequent intercourse than their unemployed, low-income counterparts. The investigators suggest that perhaps even when community career opportunities are limited, young men may still seek low-skill, low-wage work, rather than further their education. Such low- wage jobs offer a means for paying for dates, clothes, cars and other expenses and activities. Education, conversely, is an investment that may require deferring rewards. Thus, greater work effort by individual young men can be consistent with higher unemployment rates.

Billy and Moore (1992) hypothesize that community characteristics work together to influence reproductive behavior by creating an opportunity structure, as mentioned above, and by giving rise to social norms that influence the psychological and emotional costs and preferences for engaging in certain reproductive behaviors. The authors find that the risk of an out-of-wedlock birth to nonblack females increases in communities where the female unemployment rate is high and the median housing value is lower, suggesting that these variables create a perception of blocked opportunities and a normative influence regarding lower opportunity costs of an out-of-wedlock birth. In addition, the authors find that the child/woman ratio among women aged 15-24, as a measure of illegitimacy, has a positive effect on the risk of an out-of-wedlock birth, implying greater acceptance of childbearing and fewer psychological and emotional costs of a non-marital birth. The influence of these variables on the fertility of Hispanics could not be determined (due to insufficient sample size); fertility of blacks was not examined. Despite this, however, the authors believe that contextual variables such as these may be important for explaining fertility differentials across race/ethnic subgroups (Billy and Moore, 1992).

While the Opportunity Cost hypothesis is one explanation for why some neighborhoods are prone to higher teen birth rates than others, the economic status of a community affects what opportunities are available over time. Thus, as a local economy changes, so do available opportunities. A handful of studies

have found that the association between limited opportunities and risk of experiencing an unintended pregnancy is most often seen in those neighborhoods where there has been an economic decline. That is, unintended pregnancy is more common among communities where there has been a trend toward fewer jobs and an exodus of more moderate income families who can afford to move. For instance, Crane (1991) hypothesizes the "Epidemic Theory" as an explanation for the enormous increase of specific social problems, such as teen pregnancy, in some neighborhoods. He proposes that ghetto neighborhoods tend to experience an epidemic of these social problems. In particular, as the percent of the population in professional or managerial jobs declines, indicating a poorer quality neighborhood, the higher the teen pregnancy rate. When the quality of a neighborhood reaches a critically low point, the rate of teen pregnancy explodes to epidemic levels. If neighborhood quality does not reach a critical point, the rate of teen pregnancy will reach equilibrium at a more modest level. Although the incidence of teen pregnancy may steadily increase in some neighborhoods, such neighborhoods are strikingly different than ghetto neighborhoods according to Crane. Ghetto neighborhoods, in contrast, are characterized by a marked increase in rates of teen pregnancy because such neighborhoods are at the low end of the distribution of neighborhood quality. Crane finds evidence for this hypothesis among trends in rates of teenage childbearing among white and black female adolescents living with their parents in the worst neighborhoods of large cities where the incidence of teen pregnancy has soared. In his study, Crane finds that the sharp increases in teen pregnancy occur at around the same point of decline in neighborhood quality, specifically where the percent of workers in professional or managerial jobs has reached a low of about 4 percent.

In addition to hypothesizing that neighborhood decline influences why some neighborhoods experience explosions of social problems such as teen pregnancy, Crane suggests that these social problems are contagious and spread throughout the community via peer influence. According to Crane's theory, a community's susceptibility to epidemics depends on two conditions: 1) its risk of developing social problems, and 2) the residents' susceptibility to peer influence. A decline in neighborhood quality may

increase a community's propensity for social problems, and it is the rapid spread of the problem through peer influence that leads to epidemic levels of teen pregnancy.

Whereas Crane documents the transition of a low quality neighborhood to a ghetto neighborhood, and how that may lead to epidemics of various social problems, other researchers examine the broader picture of what leads to that transition creating an epidemic of social problems. One such author is Elijah Anderson (1989), who provides an ethnographic view of the changes in values and standards that accompany shifts in economic opportunities and neighborhood quality. Anderson explains that two entities, the "decent" families and the street culture, coexist in many neighborhoods. Each has opposing values and guidelines for appropriate behavior. The first encourages a future orientation and a focus on stability and upward mobility, whereas the second involves a faster life often revolving around violence, sex and having babies outside of marriage. As more "decent" families leave the neighborhood, because of a loss of manufacturing or professional jobs, the equilibrium between the two groups is disrupted. This leaves fewer role models who uphold the values and fulfill monitoring functions of "decent" families in the neighborhood. New role models emerge who often live off the drug trade and reject traditional values. Anderson notes that being decent is often associated with being "lame", so teens must be careful to remain decent, yet be in the street culture enough to be street wise without getting caught up in it and losing their chances for social mobility. Families may struggle to control their female adolescent's social life so that she does not become a part of the street culture. Thus, young women who are loosely connected with other sources of social and emotional support are often pulled into street peer groups. This association with the street groups makes female adolescents more vulnerable to early and out of wedlock pregnancy. In contrast decent families may provide their daughters with a sense of hope and support that show the girl she has a lot to lose by becoming an unwed parent.

Other qualitative studies also find that economic and social changes at the community level influence values about appropriate sexual behavior and actual sexual behavior. In a comparison of focus groups with

older black men and in-depth interviews with black adolescent males, Bowser (1994) finds that both older men's and adolescent males' sexuality is contextualized by the community in which they live. Furthermore, changes in the nature of communities across generations may account for differences in sexual behavior among older and adolescent males. For older men, there was a consensus in communities about what constituted appropriate sexual behavior for young adults, which both parents and neighbors enforced. In more contemporary times, there is little consensus about what is right or wrong, and neighbors do not monitor one another's children. The young men have no vision of playing any useful or productive roles in society and everyone is doing their own individual "thing", whether that is selling drugs or working.

The importance of parental supervision of teens' sexual and reproductive behavior in a declining neighborhood is clear from these descriptive studies. However, its importance has been recognized empirically in a study by Hogan and Kitagawa (1985). They find that the effect of neighborhood quality on black adolescent females' monthly rate of first pregnancy as compared to that from higher quality neighborhoods becomes insignificant when parental supervision of early dating behaviors is taken into account. This is largely due to the finding that among teens who date, the rate of sexual activity is 76 percent higher if the parents are lax rather than strict in their supervision of early dating behaviors.

In addition to the presence of employment and education opportunities for young people and the community's values and norms, the availability of family planning and abortion services in a community may influence a teen's ability or desire to protect themselves against early sex or pregnancy, resulting in lower rates of these behaviors. A few studies have found that a greater density of services is related to a lower risk of intercourse for nonblack teenagers (Brewster, Billy and Grady, 1993) and lower rates of teenage pregnancy or childbearing (Forrest et al., 1981; Anderson and Cope, 1987).

Forrest and colleagues (1981) utilized areal multivariate analysis to examine how family planning clinic enrollment is related to differences in birthrates while controlling for poverty status, education and urbanization. The authors explore the association between clinic enrollment and adolescent birthrates

between 1970 and 1975-76. For white adolescents the authors find a statistically significant negative relationship between the two variables, suggesting that in areas where there was higher clinic enrollment there were lower birthrates. Among nonwhites this pattern was slightly different and did not reach statistical significance. Specifically, birthrates for nonwhites declined over time, but not significantly. Primarily this was due to the fact that clinics were established in areas where there were higher birthrates and a greater demand for services. Thus, higher clinic enrollment was due initially to a higher demand for services. Over time clinic enrollment was negatively associated with birthrates, but the relationship was not significant by the end of the study period.

Anderson and Cope (1987) conducted a similar study using census data from 1980. Areal analyses controlling for prior fertility revealed a significant association between higher enrollment rates and lower fertility among white 15-19 year old females in all multivariate models conducted. For blacks, a significant relationship was found for only one of the four models, which the authors suggest is due to the smaller sample size of this population.

Although some empirical evidence supports a relationship between the provision of family planning services and lower fertility rates among teens, other studies offer conflicting evidence. For example, in their study looking at the impact of community characteristics on the transition to sexual activity of adolescents, Brewster et al. (1993) find that in adding individual attributes to their contextual model, the significance of the availability of family planning services disappears. In addition, Billy and Moore (1992) and Hughes et al. (1995) did not find the availability of family planning services and abortion providers to have an influence on the risk of an out of wedlock birth. Hughes and colleagues evaluated the impact of the service-expansion project known as RESPECT which involved nine existing and two new clinics in the Philadelphia area. These 12 clinics were expected to increase contraceptive services for sexually active teens which would then theoretically raise the proportion of the at-risk population served and lower fertility rates. The evaluators, however, found that the RESPECT project did not have a positive influence on clinic use or knowledge of

and perceptions about family planning clinics. Also, there was no discernible effect on teenagers' fertility. Thus, an increase in clinic resources did not significantly affect the reproductive behavior of teens.

The empirical evidence is equivocal regarding the relationship between the availability of services and rates of teen sexual activity and pregnancy. There is obviously a need for more information on how access to services on a larger community basis may influence the sexual activity and fertility patterns of teens.

One important factor for adolescents is obtaining reproductive health care services in a timely manner and consistently. Having access to routine exams, contraception, and birth control method education are difficult for this population, however. As mentioned earlier, findings regarding the role and impact of teen family planning service utilization on out-of-wedlock childbearing still have gaps. Although many unanswered questions remain, comprehensive studies in this field are minimal. Many studies address financial and geographic barriers to care, but few address the non-financial barriers to services for certain populations of teens, such as those from economically depressed neighborhoods and those from minority groups. In addition, little is known about the effectiveness of clinic services on individual teen fertility behavior. In fact, a number of program evaluation studies of existing teen family planning initiatives have simply not been conducted.

One exception to the scarcity of research in this are is a comprehensive study conducted by Chamie et al. (1982) which examined family planning and community characteristics to pinpoint differences between areas that have high versus low proportions of teens at risk for unintended pregnancies who obtain their birth control services in clinics. For example, a "high met needs" county served an average of 75 percent of teens, whereas a "low met needs" county served an average of 28 percent of the teens. The main goal of the study was to identify those family planning approaches that make the most difference in attracting teens in the context of community factors which might influence, or be influenced by, clinic effectiveness. "Clinic effectiveness" was defined by that proportion of sexually active teens who were at risk for unintended

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pregnancy and were family planning clients. The authors found that for most teens, an overriding priority in selecting a clinic was the extent to which staff were friendly and respectful to young clients. Also important was low cost and proximal distance. For teens, confidentiality was also quite important, and a lack of it could be the sole reason that care was not sought. Since findings from their work have been replicated in subsequent studies, it is important to look further at these factors that are play significant roles in the teen's decision-making process to seek contraceptive care.

Many who work in the provision of health care services such as clinic counselors and physicians have ideas about what adolescents need in terms of reproductive health care and reasons that teens may not be receiving these necessary services. Some barriers go beyond the scope of provider capacities, however, such as lack of funding or political opposition, both of which have played powerfully in impeding access to reproductive health services.

Researchers have also explored the extent to which teens' attitudes and perceptions of health care services influence health seeking behavior. Specifically, Ginsburg et al. (1995) conducted a study to understand adolescents' perceptions of health care and the factors that affect teens' decisions to seek services Of particular interest were the factors, such as preexisting attitudes and perceptions that may influence teens' views of the health care system. Unlike most studies, the project used teens to identify characteristics of health care providers and service delivery sites that were important to them in promoting and inhibiting their utilization of services. A series of group techniques that included open focus groups, a nominal group, and written surveys was conducted with ninth grade students from 39 schools in a Philadelphia school district. Three study questions were posed to the teens: 1) What characteristics of a health care provider are important to you?; 2) What characteristics of a health care site are important to you?, and; 3) How best could we encourage teens to come for health care?

Several major themes emerged that may significantly affect health care access in general for teens. Most important was that the health care provider has a respect for and an honesty with the teen. Also

important was the confidentiality with which both the provider and the agency conducted its services. In fact, confidentiality was often cited as the primary determinant of whether or not teens accessed care. For example, teens in this sample noted that they would withhold information from a provider if they felt that they could not trust or rely on him or her. A multicultural/multiracial staff in combination with outreach services specific to teens (i.e., teen rap sessions) also contributed to making a facility more attractive and more accessible to teens.

White these researchers attempted to gain a broad understanding of what was needed for teens access to health care in general, Zabin and Clark (1983) explored the particular aspects of a family planning services that were essential in helping this population to obtain reproductive health care. The goal of their work was to determine what clinic characteristics are preferred by teens seeking contraceptive services, and what family planning agencies could to encourage young clients to seek care in a timely fashion.

Data for the study consisted of a hospital, county health department, Planned Parenthood, and independent family planning clinics. By administering a written questionnaire to the clinics' pool of new teen clients, Zabin and Clark determined that confidentiality and an evidence of caring for the adolescent population were priorities for this group. In addition, teens were more apt to rely on word of mouth in their selection of a clinic, as they would often choose the one that was attended by their peers.

In a related study with the same sample, Zabin and Clark (1981) pinpointed the reasons why some teens were not getting timely contraception or reproductive health care. Although general procrastination and ambivalence headed the list of factors, confidentiality and lack of information about services were also important determinants of a teen's delay in accessing services. For example, many teens indicated that they were very concerned about obtaining birth control because they feared parental notification. In addition, several teens in the sample were apprehensive about the process of getting contraception. Much of their anxiety stemmed from both misconceptions/stereotypes and a simple lack of knowledge about what was entailed in a clinic visit.

Such work provides important evidence of the need for more initiatives to widen their exposure in their respective communities as sources of contraceptive information and services. Also, accurately informing teens of their rights (i.e., confidentiality) with respect to obtaining these services is essential. Zabin and Clark have hypothesized that tapping into certain groups of teens who are attending the clinics, such as virgins or adolescents who have tested negative in a pregnancy test, and providing them with a contraception education early is key in reversing increasing trends of out-of-wedlock childbearing.

There are many unifying reasons why the teen population in general does not access necessary health care that would help them to avoid pregnancy. However, many of these factors differ across various subgroups of adolescent. Understanding these differences is also important for improving family planning service delivery and increasing service utilization among young clients. Namely, socioeconomic status and race/ethnicity play significant roles in impeding teens' access to care. Cheng et al. (1993) found such distinctions in their study of school nurses and school-based health clinics in public schools from three districts: rural and working class, upper middle class, and urban with a high minority population. The researchers noted that concerns of confidentiality were much greater among white students from rural and suburban areas as compared to their urban and nonwhite counterparts.

Zabin and Clark (1983) also showed race differences in the need for confidential services. Specifically, confidentiality was more important for white patients than for black clients. On the other hand, among black teens the decision to seek care was more readily affected by the proximity of the clinic, and whether providers showed a genuine concern in general for the adolescent population. The authors note there were many reasons for racial disparities in preferences for specific family planning service characteristics. For example, black teens were often referred to the clinic by their mothers and indicated that they discussed issues related to pregnancy more in their home. The white sample, on the other hand, did not indicate such an openness in their homes and communities.

Other teen subgroups face barriers to health care, particularly Hispanic American teens. However,

with at least one exception, studies fail to explore utilization of services among this population. Estrada et al. (1990) noted that financial and language barriers are usually the primary reasons that Hispanic Americans do not receive adequate care. Of this group, younger Hispanic Americans seem to have the greatest difficulty in obtaining services, such as family planning, due to lack of insurance and lack of accurate information.

Clearly, there is a need for studies exploring barriers to care for the Hispanic teen population similar to those conducted for the white and black adolescents. Issues of immigrant status or acculturation, may play an additional and significant role in accessing services. Also, since discussions about sexuality are less common in the Hispanic culture (Matens, 1991) improving service delivery for this teen population may require special attention and unique outreach strategies.

Public Policy Influences

Public policy could potentially influence adolescent sexual behavior in one of two ways. One pathway is through the presence of programs that are specifically designed to discourage or delay adolescent sexual intercourse, such as sex education or family life education programs. Another alternative exists with programs which may diminish or eliminate barriers to early sex. Many critics of these options feel that such models provide incentives for adolescent sexual behavior, thereby encouraging or allowing teens to have sex when they otherwise would not. Welfare payments through Aid to Families with Dependent Children (AFDC) have been the focus of this concern for many years. In more recent years, researchers have explored the impact of child support programs on the sexual behavior of adolescent and young adult males. Key to this discussion is whether welfare policies or child support enforcement policies offer incentives or provide motivation among teens to engage in or to delay sexual activity.

Moore et al. (1995c) investigate the impact of welfare benefits on the timing of first intercourse between early and late adolescence using data from all of the National Survey of Children (NSC). They find that youth in states with more generous welfare benefit levels are not more likely to initiate sex at a younger age. Furthermore, high benefit levels relative to family income are not associated with earlier onset of sex.

Neither the proportion of persons on welfare nor the state benefit level relative to the average income in the teenager's zip code of residence is found to be associated with the timing of sexual debut. The only measure of welfare shown to have even a marginal effect on the initiation of early intercourse is at the individual and not at the community level. Specifically, receipt of welfare by both the mother and the grandmother of the adolescent shows a slight impact on sexual behavior of adolescent females.

Using data from the National Survey of Adolescent Males (NSAM), Ku et al. (1993a) examine the effects of receiving public assistance in the census tract of residence and of whether the respondent's family receives public assistance on the sexual behavior of males between the ages of 15 and 19 years. These variables are not found to be predictive of either the frequency of sexual intercourse during the previous year or of the number of partners that the young men have had during the previous year.

More recently, Sonenstein et al. (1994) explore whether child support enforcement programs would influence the sexual and parenting behavior of adolescent males. The authors propose that strong child support programs may affect sexual behavior in two ways. First, stronger programs (i.e., programs where more non-custodial fathers are paying child support) can influence male sexual behavior by raising young men's awareness of their legal obligations if they father a child. Specifically, in communities with stronger support enforcement programs, young men will observe other males being held financially responsible for their children. Young men may then come to perceive higher costs associated with childbearing because they are more likely to link such childbearing to financial and legal support obligations. Thus, young males residing in counties with more aggressive child support will be more careful about taking risks in fathering a child.

Second, stronger child support enforcement programs may also signal and reinforce shared community expectations that non-marital childbearing should be discouraged. Males living in communities with these normative expectations will perceive disapproval from their peers, their parents, and other important reference groups for non-marital pregnancies. They are expected to be more careful about getting

their unmarried partners pregnant. The preliminary results of this study support the latter hypothesis, but not the former.

Although males view pregnancy as being costly, these views do not appear to be associated with their pregnancy risk-taking behavior (Sonenstein et al., 1994). However, among non-black and black males, the AFDC child support collections rate (as a measure of child support program strength) of their respective counties of residence is significantly associated with their negative reactions to pregnancy. In turn, the respondents' expectations about such reactions to pregnancy are significant predictors of unprotected sexual activity. This was also indicative of reporting a pregnancy between 1988 and 1991.

Contraceptive Use

This portion of our review focuses on studies that explore factors related to adolescents' motivation to use contraception and to use contraceptives properly and consistently. A wide range of factors on the topic are explored including teens' attitudes toward pregnancy, contraception, and gender roles. In addition, teens' perceptions of the expectations of significant others, of the risk of pregnancy and STDs, and of social norms regarding sexual and contraceptive behavior are examined. Although the literature cites numerous factors, the emphasis tends to be on the correlation between attitudes or other psychosocial characteristics and contraceptive use. However, a greater proportion of these studies employ a theoretical framework to guide analyses of adolescent contraceptive behavior than the studies of the transition to first sex.

Studies Addressing Individual-Level Factors

Attitudes About Pregnancy and Pregnancy Intention

Once teens have engaged in sexual activity, it seems logical that the greatest motivation for using contraception is the desire to not get pregnant. Indeed, wanting to avoid pregnancy (defined as pregnancy

wantedness[3]) has been shown to predict contraceptive practice (Zabin et al.,1993). Furthermore, data from the 1987 wave of National Survey of Children (NSC) suggest that few adolescents want or intend to become pregnant when they first initiate sex (Moore et al., 1989). Across all teens, irrespective of race/ethnicity or gender, only about one percent express a desire to be pregnant at first intercourse. Unfortunately, this does not mean that the remaining 99 percent have the intention to avoid pregnancy. The proportion of sexually active teens who explicitly state that they do not want to be pregnant is roughly 80 percent among all whites and among black females, and 66 percent among black males. This leaves a sizeable minority of youth who are either ambivalent about pregnancy (i.e. see both negative and positive aspects) or who do not think about pregnancy at all, and thus are at very high risk of becoming pregnant (Zabin, 1994a; Anderson, 1989b; Furstenberg, 1991). In fact, work by Zabin and her colleagues (1993) indicates that ambivalence about pregnancy is very important for explaining the lack of contraceptive vigilance among a black, urban clinic population of teenage females.

Other studies show that use of contraception is more likely among teens who display a negative response to a hypothetical pregnancy and an overall favorable and positive attitude towards birth control (Cvetkovich et al., 1981; Herceg-Baron et al., 1990). In fact, a lower perception of the risk of pregnancy appears to be associated with sexual risk-taking behavior in general, and a less consistent contraceptive use or no contraceptive use at all (Philliber et al., 1990; Cvetkovich et al., 1981; Arnett, 1990; Jaccard et al, 1990). In a focus group study, Kisker (1985) reports that teenage women state that they often did not use birth control because they perceive their odds of becoming pregnant are low as a result of infrequent sexual activity. In fact, some young women admit that a pregnancy scare is necessary to convince them of the possibility of pregnancy and the need for birth control. The study includes teens, ages 16-19 years, of mostly middle- and lower-middle class white families from six geographic locations in the mid-west, east,

[3]The multi-dimensional measure of wantedness included a question about whether the respondent wanted to become pregnant before she thought she was pregnant, a question about how happy she would be if she found out she was pregnant and a question assessing how much of a problem the respondent thinks having a baby now would be.

and pacific north-west of the United States.

The theory of subjective probability of pregnancy by teens in their decisions about contraceptive use has been utilized in research in this field for some time (Luker, 1975). The underlying premise of Luker's model is that, for each individual act of intercourse, young women consciously or unconsciously assign advantages and disadvantages to contraceptive use and pregnancy. This constitutes a cost-benefit set which affects the likelihood that a young woman will risk pregnancy. In addition, if the woman's subjective probability of pregnancy is low, risk taking (e.g. sex without contraception) is more likely. Conversely, if the subjective probability of pregnancy is high, risk-taking is less likely to occur. Young women also assign a probability to reversing a pregnancy that may occur. Thus, young women who perceive greater access to abortion are more likely to take a pregnancy risk. All subjective probability and utility calculations may be affected by stressful life events such as divorce or death. This suggests that it is important to identify the factors associated with the cost/benefits that young women assign to pregnancy and contraceptive use and how specific stressful conditions may alter the cost-benefit set.

Several studies have used Luker's framework for understanding contraceptive risk-taking among adolescents. Philliber and Namerow (1990) use Luker's model to explore motivation for contraceptive use among sexually active females , ages 13 to 19 years, who were attending a multi-service youth center[4] in New York City. Female participants were asked to think about the last time that they had sex, and whether they considered the following scenarios: 1) the possibility of getting pregnant; 2) the good and bad things about using contraception; 3) the good and bad things about getting pregnant; 4) the possibility of getting an abortion if they were to get pregnant; 5) the likelihood of considering issues #1 - #4 the last time they had sex.

Slightly more than one-quarter of females were defined as being "risk-takers". That is, they did not

[4]The center offered recreation, tutoring, legal, health and other services, including contraceptive services.

use a method of birth control at last intercourse, or they had knowingly used a method of contraception incorrectly. Fewer than half of females reported that they thought about pregnancy or contraception the last time they had intercourse, or specifically about the pros and cons of getting pregnant; only 38 percent said that they considered whether or not they would conceive at all.

Attitudes About Contraception and Sexually Transmitted Infections

In a review of studies on adolescent contraceptive behavior published between 1965 and the early 1980s, Morrison (1985) notes the significant effect of norms and attitudes about birth control on teen contraceptive behavior. She cites that descriptive studies show adolescents' reported reasons for non-use tend to include beliefs that they cannot or will not become pregnant and negative feelings toward birth control.

One theory to explain contraceptive behavior is the Theory of Reasoned Action (Ajzen and Fishbein, 1980). A measure of the consistency between attitudes and behavior, Fishbein's model asserts that an adolescent's sexual and contraceptive behavior is a result of his/her attitudes toward performing that behavior (e.g. having protected sex), his/her beliefs about what others think he/she should do (normative beliefs), and his/her motivation to comply with those norms. One criticism of this framework is that it uses behavioral intentions as a proxy for actual behaviors, arguing that individuals who intend to perform a particular act are more likely to do so than those who show no tendency toward a particular behavior. The link between behavioral intentions and actual behaviors can be viewed as tenuous, at best, particularly in the realm of sexual and contraceptive behavior. Despite this limitation, however, the theory provides an important starting point from which to understand the link between attitudes and behavior and the role of consistency between attitudes and behavior in eliciting a specific preventive action.

Jorgensen and Sonstegard (1984) apply Fishbein's model of behavior prediction to predict adolescent pregnancy risk-taking (e.g. engaging in unprotected sex). While analyses from their sample of 244 female teens (13-18 years) show no support for Fishbein's theory and adolescent sexual behavior (previously

described), their work does indicate attitudes to be significantly and positively correlated with adolescent contraceptive behavior. That is, teens with views and normative beliefs in favor of contraception are more likely to report regularity of an effective contraceptive method.

Other researchers have modified various aspects of Ajzen and Fishbein's theory to explain teen sexual risk-taking. Jaccard and colleagues (1990) utilize a measure of relative contraceptive utility (RCU) to assess the difference (e.g, consistency) between attitudes about becoming pregnant and using the diaphragm to prevent pregnancy and the probability of contraceptive behavior. A highly positive RCU score characterizes women with positive attitudes toward the diaphragm and relatively negative attitudes toward becoming pregnant. A low RCU score describes women with a negative view of the diaphragm and a relatively less negative attitude toward becoming pregnant. The authors find that a larger RCU score is associated with a more consistent use of the diaphragm.

Others explore attitudes about specific contraceptive methods and the likelihood of using those methods consistently. Their studies examine teens' sense of the "costs and benefits" of using contraception. In a telephone survey of teens, ages 16 to 19 years, Hingson et al. (1990) find that teens who perceive few negative aspects to condom use (e.g., condoms do not reduce sexual pleasure, condoms do reduce transmission of HIV) are more likely to report that they consistently use condoms during intercourse. Other reports support the notion that teens who attribute more benefits than costs to contraceptive use are more likely to be effective contraceptive users (Kegeles et al., 1989; Keith et al., 1991; Pleck et al., 1991).

A higher degree of concern about sexually transmitted infections (STI) and HIV/AIDS is also associated with teens' intention to contracept and teens' reported contraceptive behavior (Potter et al., 1993; Pleck et al., 1991; Pleck et al., 1990; Landry et al., 1994; Gilmore et al., 1995). In fact, Gilmore (1995) finds that young black men view requests from their partners to use a condom as either an indication that the partner is infected with a STI or that the partner believes that the male teen is infected. Therefore, the risk of infection is a relevant issue for adolescents and can be a powerful factor in improving contraceptive

behavior.

Specific characteristics of some contraceptive methods may contribute to more or less consistent usage. For example, factors such as cleanliness and ease of method may be positively associated with their consistent use (Kegeles et al., 1989). However, concerns about embarrassment or reduced sexual pleasure and painfulness may interfere with consistent condom use (Pleck et al., 1991; Kegeles et al., 1989).

While a number of such studies show a link between attitudes about contraception and contraceptive use, most of these studies are cross-sectional. Thus, it is difficult to determine whether attitudes influence contraceptive use or whether familiarity with using contraception changes young people's views about the costs and benefits of birth control.

Distinguishing the direction of causality is important for understanding motivation in light of the fact that many adolescents still hold incorrect assumptions and believe myths about the dangers of using contraception. Teens often make decisions about contraception that are based on incomplete or erroneous information (Morrison, 1985). Some teens believe that contraceptive use can be physically harmful or dangerous (Zabin, 1991; Scott et al., 1988), while others often mistake symptoms associated with an STI for side effects from contraception (Cates et al, 1992).

Lack of accurate information may be particularly acute among African-American and Hispanic-American adolescents. For instance, Scott et al. (1988) find that a majority of male and female African-American and Hispanic-American teens mention at least one negative aspect of contraception. However, males are significantly more likely to identify negative aspects of contraceptives than females, and Hispanics males are more likely to do so than Hispanic females. Most of the "bad" things about contraception have to do with misconceptions about the pill such as that it can cause birth defects, can permanently stop girls from having children, and that it causes cancer.

In terms of identifying the benefits of contraception, black teens are significantly more likely than Hispanic teens to identify "good" things about contraception; black males (92 percent) are more likely to

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note positive aspects than black females (54 percent). However, ambivalence about contraception is also high among both groups, suggesting that conflict about the costs and benefits of contraception may hinder effective contraceptive use among ethnic minority teens.

These findings suggest that barriers to contraceptive use can be attributed to a lack of accurate information about the safety and side effects of various methods of birth control. However, research clearly indicates that knowledge about birth control is a necessary part but an insufficient solution for preventing pregnancy. Thus, understanding all of the factors which assist or impede adolescents' ability to discuss and negotiate the use of contraception with their sexual partners is important.

Co-Occurrence of Problem Behaviors

One of the most consistent findings in our review is the co-occurrence of other risk-taking behaviors (e.g. alcohol or drug use) and engaging in unprotected sex. In fact, irrespective of the behavior, more risk-taking in general is found to be correlated with lower levels of contraceptive protection (Ku et al., 1992a; Hingson et al., 1990; Herceg-Baron et al., 1990; Galavotti et al., 1989). Using Luker's model, Philliber and Namerow (1990) provide evidence of a "feedback effect" such that teens who take chances but do not become pregnant lower their estimate of the probability of pregnancy , thus encouraging greater risk-taking. In fact, they find that among teen females attending a multi-service center in New York City, those who use contraception sporadically or not at all and do not become pregnant are more likely to have taken a risk during their last sexual intercourse than girls who had experienced a pregnancy. Similarly, Balassone (1989) reports that among girls ages 17 and younger attending a small clinic in Oakland, California, those who discontinued contraception perceive themselves as less likely to become pregnant because pregnancy has not yet happened to them.

Other studies have used measures to capture general "thrill seeking" in order to explore both the broader concept of risk-taking and of contraceptive risk-taking. For instance, a small-scale study of female high school juniors and seniors finds that the girls who scored high on the Sensation Seeking Scale (which

includes measures of thrill and adventure seeking, disinhibition, experience seeking and boredom susceptibly) are more likely to engage in sex without contraception (Arnett, 1990).

Low levels of contraceptive use have also been demonstrated among adolescent males who exhibit other forms of risk-taking. Specifically, condom use is lowest among adolescent males who use intravenous (IV) drugs or have a partner who uses IV drugs, who have had sex with a prostitute, stranger or someone who has had multiple partners, and those who themselves have had multiple partners (Sonenstein et al., 1989a).

The majority of studies on risk-taking and contraceptive use find similar associations between risk-taking and contraceptive behavior for both males and females and across race/ethnicity groups. However, at least one study indicates that perhaps the issue of general risk-taking may be more salient for some groups than for others. In particular, Galavotti et al. (1989) find a relationship between general risk taking and sexual activity for Mexican-Americans, but not for black adolescents, suggesting that Mexican-American youths' sexual activity is more closely associated with other risk- taking and problem behaviors

Perceptions and Attitudes About Gender Roles and Couple Dynamics

Attitudes about the appropriate roles and behaviors for males and females within a sexual or dating relationship also influence the ability of teens to negotiate the use of contraception with their partner. Prior and current research suggests that teens with a feminist perspective or with liberal or egalitarian attitudes, are significantly more likely to use contraceptives (Morrison, 1985; Pleck et al., 1990; Pleck et al., 1993a). In addition, adolescent males who believe that men have a responsibility for birth control are more likely to be consistent condom users and are less prone to contraceptive and sexual risk-taking than males who hold more traditional beliefs regarding gender roles (Pleck et al., 1991; Marsiglio, 1993).

Marsiglio (1993) describes the rationale for male contraceptive behavior as encompassing two distinct psychosocial realms of reality. They include a man's "procreative consciousness" and "procreative responsibility". Procreative consciousness refers to men's subjective experiences pertaining to reproduction,

which includes both cognitive and emotional aspects of their views on fatherhood. An important aspect of men's procreative consciousness is the extent to which their views and experiences of fecundity and paternity are associated with their image of their own masculinity and of being a competent sexual partner. In general, research does not address how important fecundity is to young men's sense of self, nor does it clarify the extent to which men rely on paternity to prove their masculinity. The exceptions include the ethnographic work (Anderson, 1990; Stern, 1994) that was previously described.

Procreative responsibility encompasses men's involvement and their sense of obligation regarding contraception, pregnancy resolution, and child support and care. Two key aspects of procreative responsibility relevant to Marsiglio's work (1993) include young men's attitudes toward sharing contraceptive responsibility with their partner and their sense of responsibility to their children. Thus, men's perceptions about paternity and obligations to a partner and child during pregnancy and birth may be important predictors of their sexual and contraceptive risk-taking behavior and of their financial commitment to their children.

Studies Exploring the Influence of Partners and Peers

Relationship with Partner and Coital Frequency

Relationship with one's sexual partner influences the likelihood of using contraception. Specifically, the frequency of having sex and the duration and stability of the relationship play a vital role in adolescent contraceptive behavior, although direction of effect remains unclear. On the one hand, both coital frequency and length of present relationship have been found to be positively associated with engaging in unprotected sex (DuRant et al., 1989; Jaccard et al., 1990). Specifically, youth who have sex more frequently and youth who know their partners for a longer period of time have been found to be less cautious about having unprotected sex leading to a greater risk of pregnancy. Adolescent males in one focus group study (Gilmore et al., 1995) report that they only use condoms when they have sex with a girl

that they do not know very well.

Conversely, other studies indicate that teens who frequently date one steady partner are more likely to be described as continuous contraceptive users (Herceg-Baron et al., 1990). The type of method used is also associated with characteristics of the partner relationship. For instance, pill users have, on average, longer sexual relationships, more frequent sex, and hold more trust in their partners (Cvetkovich et al., 1981).

Communication with Partner

Length of time and stability in a relationship can significantly increase the level of comfort with one's partner and the capacity to discuss issues of sex and contraception. Studies suggest that communication between partners is a key prerequisite for using contraception, particularly at first intercourse. A focus group study of male and female adolescents reveals that one reason participants do not use contraception at first intercourse is due to a difficulty in discussing birth control with their partners (Kisker, 1985). Another study of male and female college students (average age 19) finds that teens with more extensive interpersonal and communication skills are more likely to discuss and to use effective contraceptive methods (Lowe et al., 1987).

Studies on Community and Policy Influences

Community-Level Influences

It has been hypothesized that community-level and policy-related factors may contribute to adolescent contraceptive behavior. Specifically, the availability of contraceptive and family planning services, restrictive welfare policies, and more aggressive child support programs have been targeted to have direct and indirect influences on the level of unprotected sex among teens. However, findings in support of the importance of these factors are inconclusive.

In a 1979 survey of black adolescents living in Chicago, Hogan et al. (1985) find that those adolescents living in the lowest quality neighborhoods are more likely to begin sexual activity earlier and

the least likely to have used a contraceptive at initial intercourse. However, this relationship is significant only among females. The quality of the neighborhoods was divided into quartiles depending on a variety of social, economic and demographic characteristics of the census tract. The top quartile of tracts were classified as high-quality, the middle two as medium-quality and the lowest quartile as low-quality (ghetto) neighborhoods.

In a series of in-depth interviews with adolescent black males in the 1980s, Bowser (1994) found that "the more closed the life-choice opportunities before them, the stronger was the drive to have children and the more conflict they had about using condoms." He explains that most of the young men did not initially use condoms consistently, if at all. Once they became very sexually active, the boys were more likely to use condoms, often due to an experience with a sexually transmitted disease. Those young men with steady partners used condoms less consistently. Overall, the author notes that the group was ambivalent about using condoms.

Brewster et al. (1993) examine the determinants of contraceptive use at first intercourse among non-black young women, ages 20 or younger, in the 1982 NSFG. They find that the proportion of women divorced in the census tract of residence is related to a higher probability of unprotected premarital intercourse, while better labor force opportunities for women in the census tract are associated with an increase in the probability of contraceptive use at first intercourse. This is over and above the influence of numerous other individual and community level variables. However, they do not find the availability of family planning services to influence the probability of contraception at first intercourse.

Public Policy Variables and Contraceptive Use at First Intercourse

While the presence of a coordinated pregnancy prevention program at the state level appears to influence state level rates of teen pregnancy, it is unclear as to the manner in which such policies actually affect teen behavior. Specifically, is it that such programs offer a larger context that is unsupportive of sex and unprotected sex? Or, is it that such programs offer a coordinated curriculum of sexuality education and

prevention interventions? Findings on the impact of sex education and contraceptive behavior show an association with improved contraceptive use (Dawson, 1986; Marsiglio et al., 1986; Brewster et al., 1993; Kirby et al., 1994). However, the potential for increasing contraceptive use at first sex is lost as many programs reach students only after they have become sexually active.

Moore et al. (1995c) examine the effects of several public policy variables on contraceptive use at first sex, net of factors selecting adolescents into sexual activity before the age of 18. Residing in a community with a high proportion of welfare recipients is not found to affect the probability of using contraception at first intercourse for either males or females. State-level AFDC benefits are not related to contraceptive use at first intercourse among girls but are marginally significant for male contraceptive behavior. However, the effect of benefits among boys is positive. That is, higher benefits are marginally associated with a greater likelihood of contraceptive use at first intercourse. Family measures of welfare receipt were related to a significantly lower probability of using contraception at first sex for females. Similarly, in a sample of sexually active black, white and Hispanic female adolescents at a multi-service youth center in New York City, Philliber and Namerow (1990) find that time on welfare is directly related to pregnancy risk taking. On the other hand, in a study of black teens attending high schools in Texas that were served by an adolescent health clinic, Galavotti and Lovick (1989) find that receipt of welfare benefits is a significant predictor of consistent contraceptive use, suggesting that income transfer programs may be indirectly helping teens avoid early childbearing. In fact, the more aid received by the household the more likely the adolescent used contraception consistently.

Lundberg and Plotnick (1990) note effects of family planning on the incidence of reported pregnancy among white females, ages 14 to 16, in the 1979 wave of the National Longitudinal Survey of Youth. Specifically, premarital pregnancy was more common in states with restrictive laws regarding the licensing, advertising or selling of contraceptives, net of family background measures. On the other hand, Moore et al. (1994) find no association between state-level pregnancy rates and contraceptive service utilization and

public funding for contraceptive services. The presence of coordinated[5] programs and policies for addressing teen pregnancy and parenting at the state level in 1985 (Koshel, 1990) is found to be predictive of a lower teen pregnancy rate (Moore et al., 1994).

Sonenstein et al. (1994) note no direct impact of child support program strength on the level of unprotected intercourse among adolescent males. The authors hypothesize that young men living in counties with more vigorous child support programs would be more knowledgeable about child support obligations, more concerned about avoiding pregnancies, and more careful contraceptors assuming that all other conditions are equal. However, the preliminary analyses show that while adolescent males view pregnancy as costly, such views are not associated with their pregnancy risk behavior. Similarly, a focus group study of men, ages 16-29, finds that child support laws do not play a role in their contraceptive decision-making (Landry et al., 1994).

Pregnancy Resolution

Attitudes about Abortion, Childbearing and Adoption

Many of the factors identified to be associated with sexual activity and contraceptive behavior demonstrate similar influences on young women's decisions about pregnancy resolution. It seems logical that, once pregnant, young women's decisions about how to resolve a pregnancy will be guided by predispositions that are similar to those that influence decisions about sex, pregnancy, and childbearing in general. For instance, young women who perceive fewer options, and are therefore described as being more likely to risk pregnancy, may also be less likely to choose an abortion should they become pregnant. Studies suggest that young women's decisions about pregnancy, particularly options to abort, are characterized by a more internal locus of control. Higher educational aspirations, motivation and attainment, better performance in school, and a greater skill in thinking about hypothetical situations are linked to more

[5]Coordinated can be defined as governor's office coordination of a multi-agency effort or governor's office designation (such as the health department) to coordinate a multi-agency effort.

favorable attitudes about abortion (Brazzell et al., 1988; Chilman, 1988; Blum et al., 1982; Yamaguchi et al., 1987).

Several studies on pregnancy resolution employ many of the same behavioral theories used to explore teen motivation for sexual risk-taking, including Fishbein's Theory of Reasoned Action (Cervera, 1993; Brazzell et al., 1988), Problem Behavior Theory (Plotnick, 1992; Costa et al., 1987), the Opportunity Cost Hypothesis (Robbins, 1991; Farber, 1991), and Value Expectancy Theory (Namerow et al., 1993). As several of these frameworks are described in earlier sections of the report, we will highlight the empirical evidence as it pertains to teens' decisions about pregnancy resolution.

Brazzell and Acock (1988) interview 129 sexually active females, under the age of 20 ,who receive services from three family planning clinics in South Central Indiana in 1979. The aim of this study is to examine how each young woman would resolve a hypothetical pregnancy. The authors report that general attitudes about abortion are the strongest predictor of intentions to select this alternative. Abortion attitudes also mediate the effects of other variables such as perceived attitudes of the mother and best friend, and aspirations for adulthood. The researchers note that teens are well aware of pregnancy tradeoffs and that the influence of parents relative to peers increases as teens make the transition from attitudes to actual behavior and move from decisions about relatively spontaneous behaviors (e.g. to have sex) to more decisive ones (e.g. to carry a pregnancy to term). However, additional studies are needed to document the shift from the use of peers to the involvement of parents in teen sexual decision- making.

Recent work by Plotnick (1992) using national-level data from the National Longitudinal Survey of Youth shows that high educational expectations are associated with a greater likelihood of abortion among non-Hispanic white females. However, having a positive attitude toward school or having egalitarian attitudes is not significantly related to choosing an abortion. High self-esteem is associated with a higher probability of abortion, unlike in earlier studies in which having a strong internal locus of control has a negative effect on the likelihood of abortion (Plotnick, 1992).

Placing a child for adoption is rare among teen parents. Thus, there is relatively little research on the factors that influence adolescents' decisions to release their child(ren) for adoption. Donnelly and Voydanoff (1991) explore the factors associated with the decision to place a child. They find that in comparison to teen females who keep their infants, those who relinquish their children are more likely to be younger and to be white. Those who placed their babies for adoption are more apt to hold relatively favorable attitudes towards adoption, to anticipate that they would regret the commitment of raising a child, and to regard parenting during adolescence as not being "much fun."

Racial differences and differences in future orientation among teens who select adoption versus other options have emerged. For instance, Kalmuss et al. (1991) note that young women who intend to place their babies for adoption are disproportionately white (92 percent) compared to both those who consider placing but do not relinquish the child (66 percent) and those who do not consider placing at all (48 percent). Those intending to relinquish are less likely to have received public assistance and are more inclined to aspire to college than teens not considering or selecting adoption.

Work by Kalmuss and other researchers suggest that young women who opt for adoption have a clearer sense of their futures and of their own prospects. Resnick et al. (1990) compare two groups of young mothers: "placers" -- those who relinquish their babies for adoption, and "parents" -- those who opt for rearing. The groups are matched on several characteristics including age, marital status, and ethnicity. Resnick and colleagues find that "placers" and "parents" are significantly different according to a number of characteristics. " Placers" are more likely to have a future-oriented perspective and to consider themselves not ready to provide suitable environment for child rearing. Similarly, more placers than parents hold the belief that a baby would interfere with their educational aspirations.

Influence of Family, Peers and Partners

The importance of teens' perceptions of how their family members would react to their decision about a pregnancy is clear across several studies. In particular, mothers emerge as critical sources of

influence in the way in which pregnancy resolution decisions are made. Brazzell and Acock's (1988) work indicates that perceptions of mothers' attitudes regarding abortion are strong predictors of teen females' views of abortion. Better educated mothers positively affect their daughter's attitudes about abortion which in turn influences the chance that the teen will select this option (Plotnick, 1992). Serrato (1990) documents a statistically significant positive association between having a college-educated mother and choosing abortion.

In a study of 592 young unmarried non-Hispanic females, ages 21 or younger, who reside in maternity homes, Namerow et al. (1993) find that among the factors they considered to estimate models of pregnancy resolution choices such as sociodemographic and opportunity-structure variables, the impact of significant others is a statistically significant predictor of relinquishment over adoption. The desires of mothers, partners, and close relatives for the respondent to place the baby for adoption are all positively associated with the actual decision to do so.

The evidence in recent studies regarding the influence of the young woman's partner is mixed. Donnelly and Voyandoff (1991) show that the perceived seriousness of teen females' relationships with their babies' fathers is unrelated to their pregnancy resolution decisions. Similarly, Bachrach et al. (1992) report that neither disagreeing with partners regarding the pregnancy outcome nor a lack of knowledge about the partner's attitude is statistically significant in their models. However, Resnick et al. (1990) find "placers" to be particularly less likely than "parents" to allow partner preferences for certain resolution options to affect their pregnancy resolution decisions. Brazzell and Acock (1988) report that closeness to the sexual partner has a significant negative effect on teen females intention to abort a hypothetical pregnancy.

In addition to their partners, peers are also important influences on adolescents' pregnancy decisions. Brazzell and Acock (1988) indicate females' perceptions of the attitudes of a best friend is the strongest predictor of abortion intentions. Resnick et al. (1990) find that teens who choose to keep their babies are significantly more likely than those who placed their infants for adoption to have friends (and siblings) who

experienced a teenage pregnancy. Further evidence of the importance of peers comes from Herr's (1989) small study of pregnant adolescents. She finds that those who did not have peers who were parents were more likely to select adoption.

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Community and Policy-Level Influences

Findings regarding the effect of contextual factors on pregnancy resolution among adolescent females are mixed. For instance, Serrato (1990) shows that the unemployment levels in states are not statistically related to abortion among young women. In contrast, analyses by Moore et al. (1994) reveal that public funding for abortion at the state level predicts that a higher proportion of pregnancies to females, ages 15 to 19, end in abortion. Micro- or individual-level analyses of the effects of policy variables on individual-level decisions also show an effect of laws and programs on pregnancy resolution.

Lundberg and Plotnick (1990) document that restrictive abortion funding policies have a negative effect on the odds of abortion versus carrying a pregnancy to term, while the availability of abortion has a positive effect on abortion.

III. Key Findings from Literature Review of Adolescent Motivation to Prevent Pregnancy

What We Know from the Literature

Our review of the literature on adolescent motivation to avoid pregnancy and sexual-risk taking indicates several common themes that will be helpful in the development of a common framework. First, there is clear and consistent evidence that teens' attitudes about pregnancy in general, and about sex and contraception in particular, are important precursors of sexual behavior. Teens who are supportive of sex or who are more liberal in their views about sex are more likely to engage in sexual activity. Similarly, teens who see benefits to contraceptive use relative to the costs of contraception are more likely to be effective and consistent contraceptive users.

Second, simply capturing attitudes about sex and pregnancy in the absence of teens' views about other relevant behaviors (e.g., gender norms, definitions of manhood and womanhood) and the perceptions of the attitudes of others about those behaviors ignores the larger context of interpersonal relationships in which decisions about sex and contraception are made. In fact, the male-female partner dyad and negotiations about sex and contraception remain virtually unexplored. Information about how negotiations and discussions about sex and contraception move across a continuum of sex between strangers or acquaintances to sex between individuals in a more stable relationship is desperately needed. Given the significant influence of community and subgroup norms about relationships and appropriate sexual behaviors, any comprehensive framework of adolescent motivation should take into consideration teens' own predispositions toward pregnancy risk-taking and predispositions of key individuals, including potential sexual partners, peers and family members, and the context of those relationships.

Third, while teens' own attitudes are important determinants of adolescent sexual behavior, evidence in support of causality is limited and inconclusive. In fact, studies testing specific behavioral theories suggest that the lack of consistency between attitudes and behavior among teens (whether due to the level of cognitive development or due to the unplanned nature of sexual relationships during adolescence) may

be limiting to a researcher's ability to develop and to empirically test a comprehensive model of adolescent sexual and contraceptive behavior. Indeed, one of the most provocative pieces of evidence to emerge from our review is the sizeable proportion of teens who are either ambivalent about pregnancy and contraceptive use, or who do not even think about the possibility of getting pregnant or using contraception when they have sex. This ambivalence is quite presumably related to the inconsistency between attitudes and behaviors described in studies we reviewed, and certainly warrants further scrutiny.

Finally, community and policy-level measures may play a crucial role in adolescent sexual and contraceptive behavior in several ways, although further empirical testing is needed. Specifically, lack of economic opportunities and declines in neighborhood quality appear to provide a context that is devoid of viable life options, supportive networks, values consistent with upward mobility and regular monitoring of youth behavior. However, the manner in which such contexts influence teen fertility remains unclear. On the one hand, youth behavior may be influenced directly by the emigration of more moderate income and upwardly mobile families which tips the balance of community values toward early, non-marital childbearing and less monitoring of youth activities and positive role models. On the other hand, behavior may be influenced by a tangible lack of economic and human resources, both of which limit the number of employment, social and educational activities for youth, and may also influence availability and accessibility to contraceptive and health related services. The true association between community context and fertility most likely lies somewhere in the combination of these two theoretical approaches.

The impact of public policy may on teen fertility-related behavior may also be direct or indirect. Direct effects occur from a change in the cost-benefit assessment teens place on preventive actions. Thus, aggressive child support policies, for example, may alter perceived negative consequences for fathering a child leading to a greater motivation to minimize the risk of unintended pregnancy. On the other hand, indirect effects may be observed by policies as they may affect changes in community norms that no longer support early, unprotected sex and pregnancy. Irrespective of the kind of relationship, the larger community

and societal context has a significant potential to influence adolescent sexual risk-taking and thus is an integral part of a holistic approach to understanding adolescent motivation to prevent pregnancy.

Areas in Need of Further Exploration

While common themes emerge from our literature review, several limitations in the literature can also be documented. We view these gaps as opportunities to explore new ideas and concepts via focus groups and concept mapping groups in the next phases of this study. In addition, areas for additional research may indicate new conceptual domains that could be incorporated into a comprehensive framework of adolescent motivation. We identify four areas in which to focus future research efforts in the area of adolescent motivation and pregnancy prevention.

First, while several behavioral theories are used to explore adolescent sexual and pregnancy risk-taking, few have been subjected to empirical testing among a large sample of economically and racially/ethnically diverse group of teens. Specifically, while several models present hypotheses to explain the behavior of all teens, the majority have been tested among samples of adolescent females, or among samples of white adolescents. It is unclear whether specific theories would withstand empirical scrutiny among a more diverse sample of American youth.

Second, existing theories tend to focus on the individual adolescent and rarely take into consideration assessment of the influence of others or norms about certain preventive behaviors. With few exceptions, behavioral theories used to explain underlying motives for sexual risk-taking fail to take into account the larger context of adult life (e.g., access to contraceptive services). One presumes that the larger context would somehow influence the norms about sexuality and contraception or the cost-benefit assessment used when making decisions about sex and contraception. However, the manner in which this larger realm influences the "normative" or "cost-benefit" set, or whether the impact or the relative weight of contextual factors remains consistent across individuals, is unknown. For example, would the economic context or

normative context demonstrate greater importance in the decision-making process for low-income teens, relative to decisions made by adolescents from moderate to high incomes? Current studies cannot answer such questions, and existing theories are insufficient to explore the relationship between individual, family, and contextual factors.

Third, the lack of information about interpersonal relationships between male and female adolescent couples, about perceptions of the nature of such relationships and about the influence of culture on norms and appropriate gender and sexual behaviors is striking. It is at this level during an individual coital act (as noted by Luker) that actual decisions about having sex and using contraception are made. Exploring the dynamics at the couple level and understanding gender differences in the perceptions of and responses to those dynamics, will be key for the next wave of behavioral theories.

Finally, the underlying premise that adolescent motivation to prevent pregnancy is truly guided by rational decisions about sex and contraception should also be questioned. This is not to presume that all sexual behavior among teens is highly volatile and unaffected by interventions and social supports that could alter attitudes or perceptions shown to be associated with sexual risk-taking behavior. Clearly, there is evidence to the contrary. Rather, we suggest that understanding the extent to which "irrationality" is reasonable for certain teens (e.g., younger adolescents, adolescents with developmental deficiencies) and not others, and examining the cultural and social realities in which teen sexual behavior "seems" rational will be important. Future research and behavioral theories should explore the role that adolescent development and the ambivalence and dissonance between values and behaviors play in sexual risk-taking among youth.

IV. Developing a Preliminary Framework of Adolescent Motivation to Prevent Pregnancy

Common themes and gaps in the literature offer several ideas for a preliminary, comprehensive framework of pregnancy risk-taking among adolescents. Figure 1 illustrates the specific factors we hypothesize to influence the likelihood of an adolescent having sex and using contraception. Aspects of the model include three primary sets of factors: 1) external influences, such as community characteristics (e.g., employment and economic opportunities, norms and values about sex and contraception, contraceptive service availability) and social policies (e.g., welfare benefits, child support programs), family background and family process measures, and peer groups/significant others; 2) individual characteristics of the adolescent, including attitudes, perceptions and ambivalence about sex, pregnancy, and contraception, knowledge and beliefs, and interpersonal and communication skills, and; 3) interpersonal context of coitus, or the context in which adolescents, as couples, confront issues of sex, pregnancy and contraception.

External factors determine the range of adolescent attitudes and normative beliefs, knowledge and ability to discuss and negotiate with others, and access to services to follow through on desires to avoid pregnancy. Next, individual characteristics of each adolescent partner jointly contribute to the quality and content of the interpersonal context. Thus, each teen comes to the interpersonal context with his/her own set of individual attitudes, normative beliefs, and interpersonal skills, all determined and sustained by the external factors that are dominant in their lives. Key to this framework, therefore, is the interaction between individual factors and the interpersonal context between sexual partners. That is, while external forces help to shape adolescent attitudes, knowledge and interpersonal skills, and provide health resources to act on fertility desires, it is within the interpersonal context that the strength and the stability of attitudes and skills are tested. Adolescents who are able to successfully negotiate avoidance of sex or the effective use of contraception will be most likely to avoid or minimize pregnancy risk-taking (i.e., avoid having sex, or use contraception if they become sexually active). The ability to "successfully negotiate" the interpersonal

context, however, is determined by several aspects of the couple relationship. We expect that couples with competing normative attitudes and beliefs, couples with different levels of negotiation and communication skills, or different levels of access to and comfort with health services, will experience a range of challenges about whether to have sex or whether to use contraception. Similarly, the quality of the interpersonal relationship, such as how long partners have been dating or known one another, or the level of romantic involvement, or level of trust will alter the context of decision making between couples. Thus, learning more about the interpersonal context of adolescent and youth relationships, and the correlation between the interpersonal context and individual characteristics is critical for understanding adolescent pregnancy risk-taking at any given moment in time.

In addition, as we expect gender and race/ethnicity differences in both the external context and normative context, individual attitudes, and the context of the interpersonal relationship, we presume this framework may be slightly different for different groups of adolescents, although core elements will remain essentially unchanged. For instance, we anticipate that the basic elements of the framework (e.g., external factors, individual factors, interpersonal context) to be fairly constant across groups, and the interpersonal context will emerge as the critical element for understanding pregnancy risk-taking. However, the relative strength or importance of each construct may be different for males versus females, or for whites versus African-Americans, versus Hispanic-Americans. Similarly, constructs or certain aspects of constructs may not be operationalized in the same way for each subgroup.

Two final comments about our preliminary framework are worth mentioning. First, the preliminary framework is considered to be dynamic. That is, over time, and as individuals mature, the relative importance of any one construct, and the intercorrelation between constructs may be different. The dynamic nature of this framework is important for understanding the role of adolescent development in pregnancy

risk-taking, and how the nature and the context of such behavior may be different for younger adolescents versus older teens or young adults. Furthermore, the context of adolescents lives may change (e.g., family background, family processes, community context, social policies), all of which may influence other factors that would predispose teens to or minimize the risk of pregnancy.

Second, success or failure with avoiding pregnancy can "feedback" and influence individual-level factors and the interpersonal context. Teens who experience a pregnancy or who are successful at avoiding pregnancy may align their attitudes with their behaviors, irrespective of whether this is in the direction of continued pregnancy risk-taking or pregnancy avoidance. Considering this feedback over time may help to understand the manner in which characteristics such as ambivalence, or developing and strengthening interpersonal and communication skills contribute to or maintain certain pregnancy risk-taking behaviors.

The preliminary framework we propose is based upon key findings from our review. Specifically, we incorporate elements from several existing behavioral theories and ethnographic studies, but place a greater emphasis on the interpersonal context of sexual relations and the larger social and economic context of adolescents' lives. We will use focus groups and concept mapping groups to modify and refine this preliminary model and to explore the relative importance of specific constructs for pregnancy risk-taking among a contemporary and diverse group of American youth.

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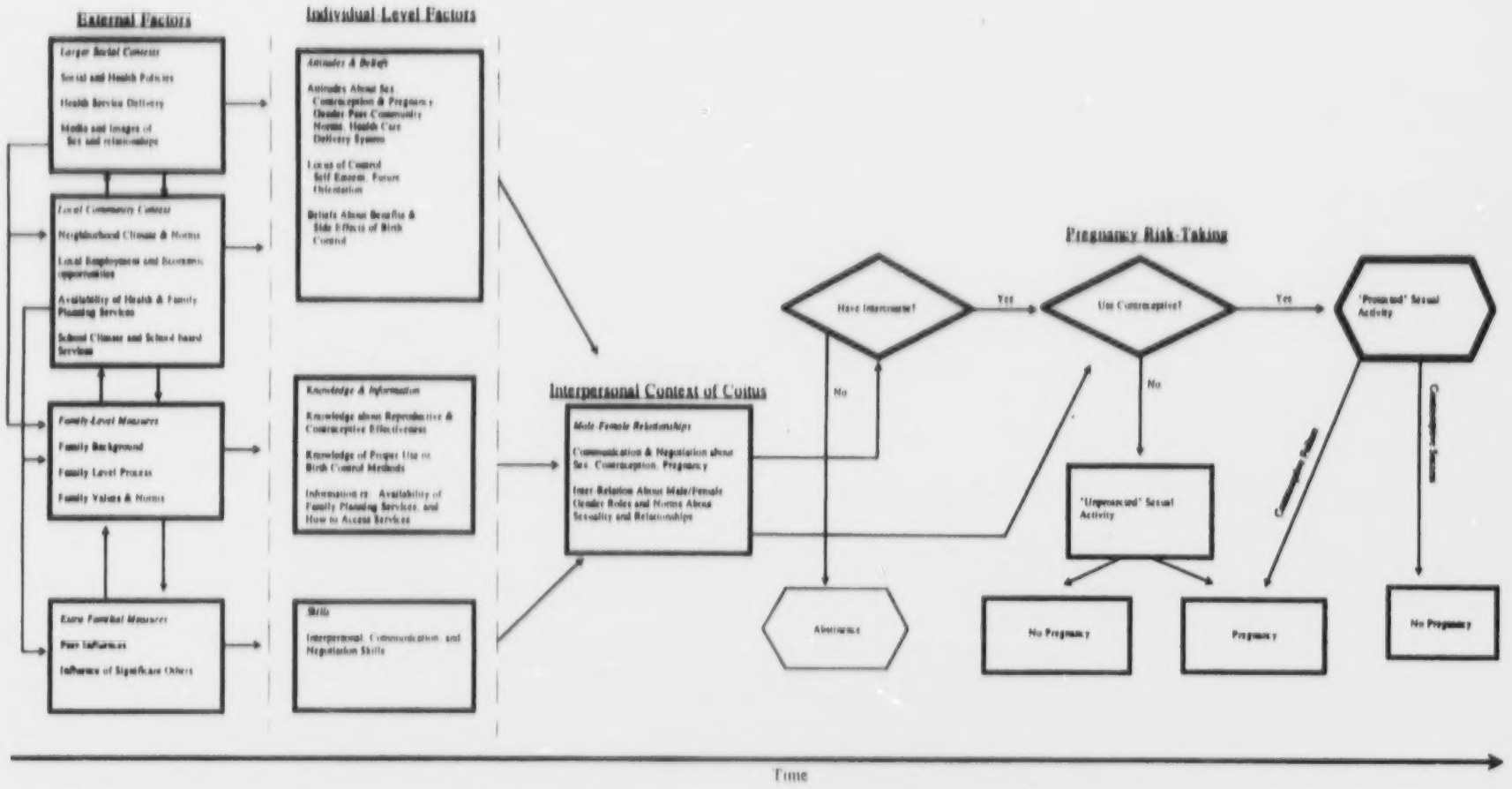
Figure 1: Preliminary Conceptual Framework of Adolescent Pregnancy Risk Taking



Source: Sugland, B.W., Wilder, K.W., Chandra, A., 1996. Understanding adolescents' motivation to prevent pregnancy: A preliminary review of the literature. Prepared for the Office Population Affairs, Department of Health and Human Services

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Literature Cited

Anderson, E. 1989. "Neighborhood effects on teenage pregnancy." In Jencks, C. (eds). The Urban Underclass, 375-398.

Anderson, J., Kann, L., Holtzman, D., Arday, S., Truman, B., and Kolbe, L. 1990. "HIV/AIDS knowledge and sexual behavior among high school students." Family Planning Perspectives 22(6): 252-255.

Anderson, J.E., and Cope, L.G. 1987. "The impact of family planning program activity on fertility." Family Planning Perspectives 19(4): 152-157.

Arnett, J. 1990. "Contraceptive use, sensation seeking, and adolescent egocentrism." Journal of Youth and Adolescence 19(2): 171-180.

Ajzen, I., and Fishbein, M. 1980. Understanding attitudes and predicting social behavior. Englewood Cliffs, NJ: Prentice Hall.

Bachrach, C.A., Stolley, K.S., and London, K.A. 1992. Relinquishment of premarital births: Evidence from national survey data. Family Planning Perspectives. 24(1):27-32.

Balassone, M.L. 1989. "Risk of contraceptive discontinuation among adolescents." Journal of Adolescent Health Care. 10: 527-533.

Benda, B. B., and DiBlasio, F. A. 1991. "Comparison of four theories of adolescent sexual exploration." Deviant Behavior 12(3): 235-257.

Billy, J.O.G., and Moore, D.E. 1992. "A multilevel analysis of marital and nonmarital fertility in the U.S." University of North Carolina Press, Social Forces 70(4):977-1011.

Billy, J.O.G., Brewster, K.L., and Grady, W.R. 1994. "Contextual effects on the sexual behavior of adolescent women." Journal of Marriage and the Family 56: 387-404.

Bowser, B. 1994. " African American Male Sexuality through the Early Life Course."pp. 127-150 in A.S. Rossi (Ed.), Sexuality Across the Life Course, Chicago:University of Chicago Press.

Boyer, D., and Fine, D. 1992. "Sexual abuse as a factor in adolescent pregnancy and child maltreatment." Family Planning Perspectives 24: 4-11.

Brazzell, J.F., and Acock, A.C, 1988. "Influence of attitudes, significant others, and aspirations on how adolescents intend to resolve a premarital pregnancy." Journal of Marriage and the Family 50: 413-425.

Brewster, K. 1994. "Race differences in sexual activity among adolescent women: The role of neighborhood characteristics." American Sociological Review 59:408-424.

Brewster, K.L., Billy, J.O.G., and Grady, W.R. 1993. "Social context and adolescent behavior: The impact of community on the transition to sexual activity." Social Forces 71: 713-740.

Cates, Jr., W. And Stone, K.M. 1992. "Family planning, sexually transmitted diseases and contraceptive choice: A literature update." Family Planning Perspectives. 24(2): 75-84.

Cervera, N.J. 1993. "Decision making for pregnant adolescents: Applying reasoned action theory to research and treatment." Families in Society 74(6):355-365.

Chamie M., Eisman S., Forrest J., Orr MT., and Torres A. (1982). "Factors affecting Adolescents' Use of Family Planning Clinics." Family Planning Perspectives. 14(3):126-129.

Cheng T., Savageau J., et al. (1993). "Confidentiality in Health Care: A Survey of Knowledge, Perceptions, and Attitudes among High School Students." JAMA 269(11):1404-1407.

Costa, F., Jessor, R., and Donovan, J.E. 1987. "Psychosocial correlates and antecedents of abortion: An exploratory study." Population and Environment 9(1):3-22.

Crane, J. 1991. "The epidemic theory of ghettos and neighborhood effects on dropping out and teenage childbearing." American Journal of Sociology 96(5):1226-1259.

Cvetkovich, G. and Grote, B. 1981. "Psychosocial maturity and teenage contraceptive use: An investigation of decision-making and communication skills." Population and Environment 4(4):211-226.

Delamater,J. 1983. An intrapersonal and interactional model of contraceptive behavior. In D. Byrne & WA Fisher (Eds.), Adolescents, Sex,and Contraception. Hillsdale, NJ: Lawrence Erlbaum

Dilorio, C., and Riley, B. 1988. Predictors of loneliness in pregnant teenagers. Public Health Nursing. 5(2):110-115.

Donnelly, B.W. and Voydanoff, P. 1991. "Factors associated with releasing for adoption among adolescent mothers." Family Relations 40(4):404-410.

Durant, R.H., and Sanders, J.M. 1989. "Sexual behavior and contraceptive risk-taking among sexually active adolescent females." Journal of Adolescent Health Care 10:1-9.

East, P.L. 1994. "The younger sisters of childbearing adolescents: Their sexual and childbearing attitudes, expectations, and behaviors." Paper presented at the Society for Research on Adolescence, February, 1994.

East, P.L. and Felice, M.E. 1992. "Pregnancy risk among the younger sisters of pregnant and childbearing adolescents." Journal of Developmental and Behavioral Pediatrics 13: 128-136.

East, P.L., Felice, M.E., and Morgan, M. 1993. "Sisters' and girlfriends' sexual and childbearing behavior: Effects on early adolescent girls' sexual outcomes." Journal of Marriage and the Family 55: 953-963.

Estrada AL, Trevino FM, Ray LA. (1990). "Health Care Utilization Barrier Among Mexican Americans: Evidence from HHANES 1982-1984." American Journal of Public Health. 80(Suppl): 27-31.

Farber, N.B. 1991. "The process of pregnancy resolution among adolescent mothers." Adolescence 26(103):697-716.

Fishbein, M. 1972. Towards an understanding of family planning behaviors. Journal of Applied Social Psychology. 2(3):214-227.

Forrest, J.D., Hermalin, A.I., and Henshaw, S.K. 1981. "The impact of family planning clinic programs on adolescent pregnancy." 13(3):109-116.

Furstenberg, F.F. 1991. As the pendulum savings: Teenage childbearing and social concern. Family Relations 40(2):127-138.

Galavotti, C. and Lovick, S.R. 1989. "School based clinic use and other factors affecting adolescent contraceptive behavior." Journal of Adolescent Health Care 10(6): 506-512.

Gibson, J. W., and Kempf, J. 1990. "Attitudinal predictors of sexual activity in Hispanic adolescent females." Journal of Adolescent Research 5(4): 414-430.

Gilmore, S., Delamater, J. And Wagstaff, D. 1995. "Sexual Decision-Making by Inner-City Black Adolescent Males." Center for Demography and Ecology Working Paper 95-04.

Ginsburg K., Slap G., Cnaan A. et al. (1995). "Adolescents' Perceptions of Factors Affecting Their Decisions to Seek Health Care." JAMA. 273(24):1913-1918.

Herceg-Baron, R., Harris, K.M., Armstrong, K., Furstenberg, F., and Shea, J. 1990. "Factors differentiating effective use of contraception among adolescents." Advances in Adolescent Mental Health. Vol. 4, Jessica Kingsley Publishers Inc.

Herold, E.S. 1980. Contraceptive attitudes and behavior of single adolescent females. Final Report (NICHD Contract No. H01-HD-93809). Bethesda, MD: National Institute of Child Health and Human Development, Center for Population Studies.

Herr, K.M. 1989. Adoption versus parenting decisions among pregnant adolescents. Adolescence 24:795-799.

Hingson, R.W., Strunin, L., Berlin, B.M. and Heeren, T. 1990. "Beliefs about AIDS, use of alcohol, drugs and unprotected sex among Massachusetts adolescents." American Journal of Public Health 80: 295-299.

Hogan, D.P., and Kitagawa, E.M. 1985. "The impact of social status, family structure, and neighborhood on the fertility of black adolescents." American Journal of Sociology 90(4):825-855.

Hovell, M., Sipan, C., Blumberg, E., Atkins, C., Hofstetter, C. R., and Kreitner, S. 1994. "Family influences on Latino and Anglo adolescents' sexual behavior." Journal of Marriage and the Family 56: 973-986.

Hughes, M.E., Furstenberg, F.F., and Teitler, J.O. 1995. "The impact of an increase in family planning services on the teenage population of philadelphia." Family Planning Perspectives 27(2):60-65,78.

Jaccard, J. Helbig, D., Wan, C.K. Gutman, M., and Kritz-Silverstein, D. 1990. "Individual differences in attitude-behavior consistency: The prediction of contraceptive behavior." Journal of Applied Social Psychology 20: 575-617.

Jorgensen, S.R., and Sonstegard, J.S. 1984. Predicting adolescent sexual and contraceptive behavior: An application and test of the Fishbein model. Journal of Marriage and the Family ( ):43-55.

Kalmuss, D.S., Namerow, P.B., and Cushman, L.F. 1991. "Adoption versus parenting among young pregnant women." Family Planning Perspectives 23(1):17-23.

Kegeles, S.M., Adler, N.E., and Irwin, C.E. 1989. "Adolescents and condoms: Associations of beliefs with intentions to use." American Journal of Disease of Children 143: 911-915.

Keith, J.B., McCreary, C., Collins, K., Smith, C.P., and Bernstein, I. 1991. "Sexual activity and contraceptive use among low income urban black adolescent females." Adolescence 20: 769-780.

Kirby, D., Short, L., Collins, J., Rugg, D., Kolbe, L., Howard, M., Miller, B.C., Sonenstein, F., and Zabin, L. 1994. School-based programs to reduce sexual risk behaviors: A review of effectiveness. Public Health Reports 109(3):339-360.

Kisker, E. 1985. "Teenagers Talk About Sex, Pregnancy, and Contraception. Family Planning Perspectives 17 (2): 83-90.

Kissman, K. 1990. Social support and gender role attitude among teenage mothers. Adolescence 25(99):709-716.

Ku, L., Sonenstein, F. L., and Pleck J. H. 1993a. "Neighborhood, family, and work: Influences on the premarital behaviors of adolescent males." Social Forces 72:479-503.

Ku, L., Sonenstein, F.L., and Pleck, J.H. 1992a. "Patterns of AIDS-related risk and preventive behaviors among teenage men in the U.S.A." Public Health Reports 107:131-138.

Landry, D.J. and Camelo, T.M. 1994. "Young unmarried men and women discuss men's role in contraceptive practice." Family Planning Perspectives 26(5): 222-227.

Lauritsen, J.L. (1994). Explaining Race and Gender Differences in Adolescent Sexual Behavior. Social Forces. 72(3):859-884.

Lowe, C.S. and Radius, S.M. 1987. "Young adults contraceptive practices: An investigation of influences. " Adolescence 22(86): 291-304.

Lowenstein, G. and Furstenberg, F.F. 1991. "Is teenage sexual behavior rational?" Journal of Applied Social Psychology 21(12): 957-986.

Luker, K. 1975. "Toward a theory of contraceptive risk taking," (Chapter 5) in Taking Chances. Los Angeles: Univeristy of California Press.

Marsiglio, W. 1993. "Adolescent males' orientation toward paternity and contraception." Family Planning Perspectives 25(1):22-31.

Marsiglio, W. and Menaghan, E.G. 1990. "Pregnancy resolution and family formation: Understanding gender difference in adolescent preferences and beliefs." Journal of Family Issues 11(3):313-333.

Marsiglio, W., and Mott, F.L. 1986. Impact of sex education on sexual activity, contraceptive use and premarital pregnancy among American teenagers. Family Planning Perspectives 18:151-162.

Matens R. (1991). "Cultural Sensitivity in AIDS education for the Hispanic community." AIDS Patient Care. 140-142.

McAnarney, E., and Schreider, C. 1984. Identifying social and psychological antecedents of adolescent pregnancy. William T. Grant Foundation. N.Y.

McCullough, M. And Scherman, A. 1991. Adolescent pregnancy: Contributing factors and strategies for prevention. Adolescence 26(104):809-816.

Miller, B.C., King, __., Jenson, __., Lee, __., Norton, M.C., and Christopherson, __. 1995. Parent-teen sexual communication values and adolescent sexual behavior. Unpublished manuscript. Utah State University.

Miller, B.C., Card, J., Paikoff, R., and Peterson, J. 1992. Preventing Adolescent Pregnancy: Model Programs and Evaluations. Sage Publications: New York.

Moore, K.A., Blumenthal, C., Sugland, B.W., Hyatt, B., Snyder, N.O. and Morrison, D.R. 1994. "State variation in rates of adolescent pregnancy and childbearing." Washington, DC : Child Trends, Inc.

Moore, K.A., Miller, B.C., Glei, D., Morrison, D.M. 1995 "Adolescent Sex, Contraception, and Childbearing: A Review of Recent Research. " Report prepared for the Assistant Secretary of Planning and Evaluation, U.S. Department of Health and Human Services. Washington, DC: Child Trends, Inc.

Moore, K.A., Nord, C.W., and Peterson, J.L. 1989. "Nonvoluntary sexual activity among adolescents." Family Planning Perspectives 21: 110-114.

Moore, K.A., Sugland, B., Blumenthal, C., Glei, D., and Snyder, N. 1995d. "Adolescent pregnancy prevention programs: Interventions and evaluations." Report prepared for the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. Washington, DC: Child Trends, Inc.

Morrison, D.M. 1985. "Adolescent contraceptive behavior: A review." Psychological Bulletin 98(3): 538-568.

Mueller, K. E. and Powers, W. G. 1990. "Parent-child sexual discussion: Perceived communicator style and subsequent behavior." Adolescence 25: 469-482.

Namerow, P.B., Kalmuss, D.S., and Cushman, LF. 1993. "The determinants of young women's pregnancy-resolution choices." Journal of Research on Adolescence 3(2):193-215.

Newcomer, SF and Udry, JR. 1983. "Adolescent Sexual Behavior and Popularity." Adolescence 18:515.

Nolin, M.J. and Petersen, K.K. 1992. "Gender differences in parent-child communication about sexuality: An exploratory study." Journal of Adolescent Research 7: 59-79.

Peak, G. (1993). An exploration of African American adolescents' perceptions of the transition to adulthood. Unpublished doctoral dissertation, Johns Hopkins University, School of Hygiene and Public Health, Baltimore, MD.

Philliber, S. and Namerow, P.B. 1990. "Using the Luker model to explain contraceptive use among adolescents." Advances in Adolescent Mental Health. Vol. 4, Jessica Kingsley Publishers Inc.

Pleck, J.H., Sonenstein, F.L., and Ku, L.C. 1991. "Adolescent males' condom use: Relationships between perceived cost-benefits and consistency." Journal of Marriage and the Family 53: 733-746.

Pleck, J.H., Sonenstein, F.L., and Ku, L. 1993a. "Masculinity ideology: Its impact on adolescent heterosexual relationships." Journal of Social Issues 49(3): 11-30.

Pleck, J.H., Sonenstein, F.L., and Ku, L. 1990. "Contraceptive attitudes and intention to use condoms in sexually experienced and inexperienced males." Journal of Family Issues 11: 294-312.

Plotnick, R.D. 1992. "The effects of attitudes on teenage premarital pregnancy and its resolution." American Sociological Review 57:800-811.

Potter, L.B. and Anderson, J.E. 1993. "Patterns of condom use and sexual behavior among never-married women." Sexually Transmitted Diseases 20: 201-208.

Resnick, M.D., Blum, R.W., Bose, J., and Smith, M. 1990. Characteristics of unmarried adolescent mothers: Determination of child rearing versus adoption. American Journal of Orthopsychiatry 60(4):577-584.

Robbins, C. 1991. "Pregnancy, abortion, and parenthood in the adolescent life course: Psychosocial causes and consequences." Final Report to Office of Adolescent Pregnancy Programs, Office of Population Affairs.

Robinson and Frank. 1994. "The relation between self esteem, sexual activity, and pregnancy." Adolescence, 29(113):27-35.

Rodgers, J.L. and Rowe, D.C. 1988. "Influence of siblings on adolescent sexual behavior." Developmental Psychology 24(5): 722-728.

Scott, C.S., Shifman, L., Orr, L., Owen, R.G., and Fawcett, N. 1988. "Hispanic and black American Adolescent's beliefs relating to sexuality and contraception." Adolescence 13:667-688.

Serrato, C. 1990. Abortion, out-of-wedlock childbearing and public policy. Princeton, NJ: Mathematica Policy Research, Inc.

Sonenstein, F.L., Pleck, J.H., and Ku, L.C. 1989a. "Sexual activity, condom use, and AIDS awareness among adolescent males." Family Planning Perspectives 21: 152-158.

Sonenstein, F.L., Pleck, J.H., and Ku, L. 1994. "Child support obligations and young men's contraceptive behavior: What do young men know? Does it matter?" Paper presented at the Annual Meeting of the Population Association of America, Miami, FL, May.

Stern, P.L. 1994. Teen sexuality among inner-city white youth: Becoming an adult in Milton. In Garrison, Smith, and Behgarov (Eds.), Sexuality and American Social Policy: Sexuality Poverty, and Inner City (pp. 37-76). Henry J. Karser Family Foundation, Menlo Park, CA.

Sugland, B. W. (1992). Disparity between educational aspirations and expectations and the effect on early childbearing. Unpublished doctoral dissertation, Johns Hopkins University, School of Hygiene and Public Health, Baltimore, M.D.

Whitbeck, L., Conger, R., and Kao, M. 1993a. "The influence of parental support, depressed affect, and peers on the sexual behaviors of adolescent girls." Journal of Family Issues 14(2): 261-278.

Zabin, L.S. 1994a. "Subsequent risk of childbearing among adolescents with a negative pregnancy test." Family Planning Perspectives 26(5):212-217.

Zabin, L.S., Astone, N. and Emerson, M.R. 1993. "Do adolescents want babies? The relationships between attitudes and behavior." Journal of Research on Adolescence 3:67-86.

Zabin. L.S., Stark, and Emerson. 1991. "Reasons for delay in contraception clinic utilization: Adolescent clinic and non clinic populations compared." Journal of Adolescent Health 12: 225-232.

Zabin L. and Clark S. 1983. "Institutional Factors Affecting Teenager's Choice and Reasons for Delay in Attending a Family Planning Clinic." 15(1):25-29.

Zabin L. and Clark S. 1981. "Why they delay: A Study of Teenage Family Planning Clinic Patients." 13(5):205-217.

Literature Reviewed

Abrahamse, A.F., Morrison, P.A., and Waite, L.J. 1988. "Teenagers willing to consider single parenthood: Who is at greatest risk?" Family Planning Perspectives 20:13-18.

Adler, N.E. 1992. "Unwanted pregnancy and abortion: Definitional and research issues." Journal of Social Issues 48: 19-35.

Adler, N.E., Kegeles, S.M., Irwin, C.E., and Wibbelsman, C. 1990. "Adolescent contraceptive behavior: An assessment of decision processes." Journal of Pediatrics 116(3): 463-471.

Alexander, C.S., Ensminger, M.E., Kim, Y.J., Smith, B.J., Johnson, K.E., and Dolan, L.J. 1989. "Early sexual activity among adolescents in small towns and rural areas: Race and gender patterns." Family Planning Perspectives 21(6): 261-266.

Allen-Meares, P. 1989. "Adolescent sexuality and premature parenthood: Role of the black church in prevention." Journal of Social Work and Human Sexuality 8(1):133-142.

Allgeier, E. 1983. "Ideological Barriers to Contraception." In D. Byrne & WA Fisher (Eds.), Adolescents, Sex, and Contraception. Hillsdale, NJ: Lawrence Erlbaum.

Anderson, E. 1989a. "Sex codes and family life among poor inner city youths." Annals of the American Academy of Political and Social Sciences 501: 59-78.

.Aneshensel, CS., Fielder, EP., and Becena, RM. 1989. "Fertility and Fertility-related Behavior among Mexican American and Non-Hispanic White Women." Journal of Health and Social Behavior 30:56-76.

Baker, S.A., Thalberg, S.P., and Morrison, D.M. 1988. "Parents' behavioral norms as predictors of adolescent sexual activity and contraceptive use." Educational Psychology 23(90): 265-282.

Barker, G. and Musick, J.S. 1994. "Rebuilding nests of survival: A comparative analysis of the needs of at-risk adolescent women and adolescent mothers in the U.S., Latin America, Asia, and Africa." Childhood 2.

Biglan, A., Metzler, C.W., Wirt, A., Ary, D., Noell, J., Ochs, L., French, C., and Hood, D. 1990. "Social and behavioral factors associated with high-risk sexual behavior among adolescents." Journal of Behavioral Medicine 13: 245-261.

Billy, J.O.G., Tanfer, K., Grady, W.R., Klepinger, D.H. 1993. "The sexual behavior of men in the United States." Family Planning Perspectives 25: 52-60.

Blair, J.F. and Hein, K.K 1994. "Public policy implications of HIV/AIDS in adolescents." The Future of Children 4(3): 73-93.

Brooks-Gunn, J. and Chase-Lansdale, P.L. 1994, in press. "Adolescent parenthood." In M. Bornstein (Ed.), Handbook of Parenting. Hillsdale, NJ: Erlbaum.

Brooks-Gunn, J., Duncan, G.J., Klebanov, P.K., and Sealand, N. 1993a. "Do neighborhoods influence child and adolescent development?" American Journal of Sociology 99(2): 353-395.

Brooks-Gunn, J. and Furstenberg, F.F., Jr. 1989. "Adolescent sexual behavior." American Psychologist 44(2):249-257.

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Brown, J.D., Childers, K.W., and Waszak, C.S. 1990. "Television and adolescent sexuality." Journal of Adolescent Health Care 11(1): 62-70.

Butler, J. and Burton, L. 1990. "Rethinking teenage childbearing: Is sexual abuse a missing link?" Family Relations 39:73-80.

Casper, L.M. 1990. "Does family interaction prevent adolescent pregnancy?" Family Planning Perspectives 22:109-114.

Clark, S., Zabin, L., and Hardy, J. 1984. "Sex, Contraception and Parenthood:Experience and Attitudes among Urban Black Young Men." Family Planning Perspectives. 16(2):77-82.

Clarke, G.R.G., and Strauss, R.P. 1994. "Children as income producing assets: The case of teen illegitimacy and government transfers." Unpublished manuscript.

Coates, TJ, Petersen, A, and Perry, C. 1982. Promoting Adolescent Health: A Dialog on Research and Practice. New York:Harcourt Brace Jovanovich.

Cooksey, E.C. 1990. "Factors in the resolution of adolescent premarital pregnancies." Demography 27(2):207-218.

Cooper, M.L., Pierce, R.S. and Huselid, R.F. 1994. "Substance use and sexual risk taking among black and white adolescents." Health Psychology 13: 251-262.

Costa, F.M., Jessor, R., Donovan, J.E., and Fortenberry, J.D. 1995. "Early Initiation of sexual intercourse: The influence of pyshosocial unconventionality." Journal of Research on Adolescence 5: 91-121.

Danielson, R., Marcy, S., Plunkett, A., Wiest, W. And Greenlick, M. 1990. "Reproductive Health Counseling for Young Men:What Does it Do? Family Planning Perspectives 22(3): 115-121.

Davidson, AR and Morrison, DM. 1983."Predicting contraceptive behavior from attitudes: A comparison of within versus across subject procedures."Journal of Personality and Social Psychology. 45:997-1009.

Davis, R.A. 1989. "Teenage pregnancy: A theoretical analysis of a social problem." Adolescence 24:19-28.

Day, R.D. 1992. "The transition to first intercourse among racially and culturally diverse youth." Journal of Marriage and the Family 54: 749-762.

DeLamater, S. and MacCorquodale, P. 1978. Premarital contraceptive use, a test of two models. Journal of Marriage and the Family. 40:234-247.

Donaldson, P.E., Whalen, M.H., and Anastas, J.W. 1989. "Teen pregnancy and sexual abuse: Exploring the connection." Smith College Studies in Social Work 59:288-300.

Duncan, G.J. and Hoffman, S. 1990. "Welfare benefits, economic opportunities, and out-of-wedlock births among black teenage girls." Demography 27:519-535.

Durant, R.H., Jay, S., and Seymore, C. 1990a. "Contraceptive and sexual behavior of black female adolescents." Journal of Adolescent Health Care.

Durant, R.H., Seymore, C., Pendergrast, R., and Beckman, R. 1990. "Contraceptive Behavior among Sexually Active Hispanic Adolescents." Journal of Adolescent Health Care. 11:490-496.

Edwards, S. 1994. "The role of men in contraceptive decision-making: current knowledge and future

implications." Family Planning Perspectives. 26(2):77-82.

Elliott, D., and Morse, B.J. 1989. "Delinquency and drug use as risk factors in teenage sexual activity." Youth and Society 21: 32-60.

Ensminger, M.E. 1990. "Sexual activity and problem behaviors among black, urban adolescents." Child Development 61: 2032-2046.

Erickson, P.I. and Rapkin, A.J. 1991. "Unwanted sexual experiences among middle and high school youth." Journal of Adolescent Health 12: 319-325.

Feldman, S., and Brown, N. 1993. "Family influences on adolescent male sexuality: The meditational role of self-restraint." Social Development 2(1): 15-35.

Fine, M. 1988. "Sexuality, schooling, and adolescent females: The missing discourse of desire." Harvard Educational Review 58(1): 29-53.

Fisher, T.D. 1989. "Family sexual communication and adolescent sexual behavior." Journal of Marriage and the Family 51: 637-639.

Fisher, WA., Byrne, D., and White, LA. 1983. Emotional barriers to contraception. In D. Byrne & WA Fisher (Eds.) Adolescent, Sex, and Contraception. Hillsdale, NJ: Lawrence Erlbaum.

Flannery, D., Rowe, D., and Gulley, B. 1993. "Impact of pubertal status, timing, and age on adolescent sexual experience and delinquency." Journal of Adolescent Research 8(1): 21-40.

Flewelling, R. L., and Bauman, K. E. 1990. " Family structure as a predictor pf initial substance use and sexual intercourse in early adolescence." Journal of Marriage and the Family 52: 171-180.

Forste, R.T. and Heaton, T.B. 1988. "Initiation of sexual activity among female adolescents." Youth and Society 19: 250-268.

Franklin, D.L. 1988. "Race, class, and adolescent pregnancy: An ecological analysis." American Journal of Orthopsychiatry 58(3):339-351.

Furstenberg, F.F. 1992. "Teenage childbearing and cultural rationality: A thesis in search of evidence." Family Relations 41:239-243.

Furstenberg, F.F., Brooks-Gunn, J., Chase-Lansdale, L. 1989. "Teenage pregnancy and childbearing." American Psychologist 44:313-320.

Geronimus, A.T. 1991. "Teenage childbearing and social and reproductive disadvantage: The evolution of complex question and the demise of simple answers." Family Relations 40(4):563-571.

Gershenson, H.P., Musick, J.S., Ruch-Ross, H.S., Magee, V., Rubino, K.K., and Rosenberg, D. 1989. "The prevalence of coercive sexual experience among teenage mothers." Journal of Interpersonal Violence. 4(2): 204-219.

Gilchrist and Schinke. 1983. "Coping with contraception: Cognitive and behavioral methods with adolescents." Cognitive Therapy and Research 7: 379-388.

Gleason, P., Rangarajan, A., and Schochet, P. 1994. "The dynamics of AFDC spells among teenage parents." Unpublished manuscript, Mathematica, Princeton, NJ.

Goldsheider, C., and Mosher, W.D. 1991. "Patterns of contraceptive use in the United States: The importance of religious factors." Studies in Family Planning 22: 102-115.

Gordon, D.E. 1990. "Formal operational thinking: The role of cognitive-developmental processes in adolescent decision-making about pregnancy and contraception." American Journal of Orthopsychiatry 60(3): 346-356.

Gorosh, M. 1982. "Patterns of contraceptive use among female adolescents." Journal of Adolescent Health Care 3(2).

Graves, K., and Leigh, B. 1994. "The relationship of substance use to sexual activity in young adults in the United States." Family Planning Perspectives 27: 18-22.

Halpern, C. T., Udry, J. R., Campbell, B., Suchindran, C., and Mason, G. A. 1994. "Testosterone and religiosity as predictors of sexual attitudes and activity among adolescent males: A biosocial model." Journal of Biosocial Science 26: 217-234.

Handler, A. 1990. "The correlates of the initiation of sexual intercourse among young urban black females." Journal of Youth and Adolescence 19(2): 159-170.

Hanson, R.A. 1990. "Initial parenting attitudes of pregnant adolescents and a comparison with the decision about adoption." Adolescence 25(99):629-643.

Hanson, S.L., Morrison, D.R., and Ginsberg, A.L. 1989. "The antecedents of teenage fatherhood." Demography 26:579-596.

Haurin, R. J., and Mott, F. L. 1990. "Adolescent sexual activity in the family context: The impact of older siblings." Demography 27: 537-557.

Haveman, R. and Wolfe, B. 1994. "The determinants of teenage out-of-wedlock births and welfare recipiency." Pp. 188-213 in Succeeding Generations: On the Effects of Investments in Children. New York, NY: Russell Sage Foundation.

Hayward, M. D., Grady, W. R., and Billy, J. O. 1992. "The influence of socioeconomic status on adolescent pregnancy." Social Science Quarterly 73(4): 750-772.

Hernandez, J., and DiClemente, R. 1992. "Self-control and ego identity development as predictors of unprotected sex in late adolescent males." Journal of Adolescence 15(4): 437-447.

Hirsch, M., Zabin, L.S., Streett, R., Hoffman-Goldwasser, E., Fitzgerald, C., Vines, E., Sagan, S., and Hardy, J.B. 1989. "The effect of sexual behavior and pregnancy on contraceptive method switching among black female teens." Journal of Adolescent Health Care 10:289-294.

Hoffman, S.D., Foster, E.M., and Furstenberg, F.F., Jr. 1993a. "Reevaluating the costs of teenage childbearing." Demography 30(1):1-13.

Hoffman, S.D., Foster, E.M., and Furstenberg, F.F., Jr. 1993b. "Reevaluating the costs of teenage childbearing: Response to Geronimus and Korenman." Demography 30(2):291-296.

Hogan,DP, Astone, NM, and Kitagawa, EM 1985. "Social and Environmental Factors influencing contraceptive use among black adolescents." Family Planning Perspectives 17(4):165-169.

Jackson, C.A. and Klerman, J.A. 1994. "Welfare, abortion, and teenage fertility." Paper presented at 1994 annual

meetings of Population Association of America, Miami, FL.

Jones, J.B. and Philliber, S. 1983. "Sexually Active but Not Pregnant: A Comparison of Teens who Risk and Teens who Plan." Journal of Youth and Adolescence. 12(3):235-251.

Kahn, J.R., Rindfuss, R.R., and Guilkey, D.K. 1990. "Adolescent contraceptive choice." Demography 27(3): 323-335.

Kalmuss, D.S. and Namerow, P.B. 1994. "Subsequent childbearing among teenage mothers: The determinants of a closely spaced second birth." Family Planning Perspectives 26(4):149-159.

Kalmuss, D.S., Namerow, P.B., and Bauer, U. 1992. "Short term consequences of parenting vs. adoption among young unmarried women." Journal of Marriage and the Family 54(1):80-90.

Karnehm, A.L. and Shepelak, N.J. 1993. "Gender differences in young adults' sexuality and contraceptive behavior." Paper presented at the Annual meetings of the American Sociological Association, Miami Beach, FL.

Kim Oh, M., Feinstein, R.A., and Pass, R.F. 1988. "Sexually transmitted diseases and sexual behavior in urban adolescent females attending a family planning clinic." Journal of Adolescent Health 9: 67-71.

Koniak-Griffin, D., Lominska, S., and Brecht, M.L. 1993. "Social support during adolescent pregnancy: A comparison of three ethnic groups." Journal of Adolescence 16(1):43-56.

Koyle, P., Jensen, L., Olsen, J., and Cundick, B. 1989. "Comparison of sexual behaviors among adolescents having an early, middle, and late first intercourse experience." Youth and Society 20(4): 461-475.

Kraft, J.M., and Coverdill, J.E. 1994. "Employment and the use of birth control by sexually active single hispanic, black, and white women." Demography 31(4):593-602.

Ku, L., Sonenstein, F.L., and Pleck, J.H. 1993c. "Factors influencing first intercourse for teenage men." Public Health Reports 108: 680-694.

Ku, L., Sonenstein, F.L., and Pleck, J.H. 1992b. "The association of AIDS education and sex education with sexual behavior and condom use among teenage men." Family Planning Perspectives 24:100-106.

Lauritsen, J.L. 1994. "Explaining race and gender differences in adolescent sexual behavior." Social Forces 72(3): 859-883.

Leigh, B. 1990. "The relationship of substance use during sex to high-risk sexual behavior." Journal of Sex Research 27: 199-213.

Lerman, R.I. 1993. A national profile of young unwed fathers. pp. 27-51 in Lerman and Ooms (eds.) Young Unwed Fathers: Changing Roles and Emerging Problems.

Luker, K. 1991. "Dubious conceptions: The controversy over teen pregnancy." American Prospect 5:73-83.

Lundberg, S. and Plotnick, R.D. 1995. "Adolescent premarital childbearing: Do economic incentives matter?" Journal of Labor Economics 13(2):177-200.

Luster, T. and Small, S.A. 1994. "Factors associated with sexual risk taking behaviors among adolescents." Journal of Marriage and the Family 56(3): 622-632.

Manlove, J. 1995b. "Breaking the cycle of disadvantage: Ties between educational attainments, dropping out and teenage motherhood." Paper presented at the annual meeting of the American Education Research Association.

Marin, BA. 1993. "Predictors of condom use among Hispanic men and women." In Cates, W., Cambell, AA (eds.) Behavioral Research on the Role of Condoms in Reproductive Health: Summary of a Conference Sponsored by the Center for Population Research, National Institute of Child Health and Human Development and the Office of AIDS Research, National Institutes of Health. May 10-12, 1993. Bethesda, Maryland, 40-44.

Mayer, S.E. 1991. "How much does a high school racial and socioeconomic mix affect graduation and teenage fertility rates?" pp. 321-341 in C. Jencks and P. Petersen (eds.) The Urban Underclass. Washington, DC: Brookings Institute.

McLaughlin, S., Pearce, S., Manninen, D. and Winges, L. 1988b. "To parent or relinquish: Consequences for adolescent mothers." Social Work 33:320-324.

McLean, A.L. and Flanigan, B.J. 1993. "Transition marking behaviors of adolescent males at first intercourse." Adolescence 28: 579-595.

Melchert, T., and Burnett, K. 1990. "Attitudes, knowledge, and sexual behavior of high-risk adolescents: Implications for counseling and sexuality education." Journal of Counseling and Development 68: 293-300.

Moore, K.A., Myers, D.E., Morrison, D.R., Nord, C.W., Brown, B. And Edmonston, B. 1993. "Age at first childbirth and later poverty." Journal of Research on Adolescence 3(4):393-422.

Morris, N.M. 1992. "Determinants of adolescent initiation of coitus." Adolescent Medicine: State of the Art Reviews 3(2): 165-180.

Mott, F. 1986. The pace of repeated childbearing among young American mothers. Family Planning Perspectives. 18:5-12.

Mott, F.L. and Haurin, R.J. 1988. "Linkages between sexual activity and alcohol and drug use among American adolescents." Family Planning Perspectives 20: 128-136.

Muram, D., Rosenthal, T.L., Tolley, E.A., Peeler, M.M., and Pitts, B. 1992. "Teenage pregnancy: Dating and sexual attitudes. " Journal of Sex Education and Therapy 18(4):264-276.

Musick, J.S. 1994. "Grandmothers and grandmothers-to-be: Effects on adolescent mothers and adolescent mothering." Infants and Young Children 6(3):1-9.

Nadelson, C., Notman, M., and Gillon, J. 1980. "Sexual Knowledge and Attitudes of Adolescents: Relationship to Contraceptive Use. 55(3):340-345.

Newcomb, M. D. and McGee, L. 1991. "Influence of sensation seeking on general deviance and specific problem behaviors from adolescence to young adulthood." Journal of Personality and Social Psychology 61: 614-628.

Norris, A.E., and Devine, P.G. 1992. "Linking pregnancy concerns to pregnancy risk avoidant action: The role of construct accessibility." Personality and Social Psychology Bulletin 18: 118-127.

O'Campo, P., Faden, R. R., Gielen, A. C., Kass, N., and Anderson, J. 1993. "Contraceptive and sexual practices among single women with unplanned pregnancy: Partner influence." Family Planning Perspectives 25:

215-219.

Ohannessian, C., and Crockett, L. 1993. "A longitudinal investigation of the relationship between educational investment and adolescent sexual activity." Journal of Adolescent Research 8(2): 167-182.

Olsen, R.J. and Farkas, G. 1990. "The effect of economic opportunity and family background on adolescent cohabitation and childbearing among low-income blacks." Journal of Labor Economics 8:341-362.

Olsen, J.A., Jensen, L.C., and Greaves, P.M. 1991. "Adolescent sexuality and public policy." Adolescence 26(102): 419-430.

Oskamp, S. and Mindick, B. 1981. Personality and attitudinal barriers to contraception. In D. Byrne & WA Fisher (Eds.), Adolescents,Sex, and Contraception. Hillsdale, NJ: Lawrence Erlbaum.

Pagnini, D.L. and Rindfuss, R.R. 1993. "The divorce of marriage and childbearing: Changing attitudes and behavior in the United States." Population and Development Review 19(2):331-347.

Parnell, A.M., Swicegood, G., and Stevens, G. 1994. "Nonmarital pregnancies and marriage in the United States." Social Forces 73(1):263-87.

Pete, J.M. and DeSantis, L. 1990. "Sexual decision making in young black adolescent females." Adolescence 25: 145-154.

Pleck, J.H., Sonenstein, F.L., and Swain, S.O. 1988. "Adolescent males; sexual behavior and contraceptive use: Implications for males responsibility." Journal of Adolescent Research 275-284.

Plotnick, R.D. 1992. "The effects of attitudes on teenage premarital pregnancy and its resolution." American Sociological Review 57:800-811.

Quiu, Y. and Hayward, M.D. 1993. "Contextual analysis of teenaged first premarital pregnancy in the United States." Paper presented at the annual meetings of the Population Assoication of America, Cincinnati, OH.

Resnick, M. and Blum, R.W. 1994. "The association of consensual sexual intercourse during childhood with adolescent health risk behaviors." Pediatrics 94(6): 907-913.

Rodgers, J.L., Rowe, D.C., and Harris, D.F. 1992b. "Sibling differences in adolescent sexual behavior: Inferring process models from family composition patterns." Journal of Marriage and the Family 54: 142-152.

Rodgers, J.L. and Rowe, D.C. 1993. "Social contagion and adolescent sexual behavior: A developmental EMOSA model." Psychological Review 100(3): 479-510.

Rodgers, J.L., and Rowe, D.C. 1990. "Adolescent sexual activity and mildly deviant behavior: Sibling and friendship effects." Journal of Family Issues 11: 274-293.

Romer, D., Black, M. et al. 1994. "Social influences on the Sexual Behavior of Youth at Risk for HIV Exposure." American Journal of Public Health. 84(6):977-985.

Rosenbaum, E., and Kandel, D. B. 1990. "Early onset of adolescent sexual behavior and drug involvement." Journal of Marriage and the Family 52: 783-798.

Rosenthal, T. L., Muram, D., Tolley, E. A., Peeler, M. M., and Pitts, B. 1992. "Teenage pregnancy: Predicting the adolescent at risk." Journal of Sex Education and Therapy 18(4): 277-285.

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Saltz, E., Pery, A., and Cabral, R. "Attacking the Personal Fable: Role-Play and Its Effect on Teen Attitudes Toward Sexual Abstinence." Youth and Society. 26(2):223-242.

Sandler, Watson, and Levine. 1992. "A study of cognitive aspects of sexual decision making in adolescent females." Developmental and Behavioral Pediatrics 13: 202-207.

Scott-Jones, D. 1991. "Adolescent childbearing: Risks and resilience." Education and Urban Society 24(1):53-64.

Scott, Jones, D. and Turner,SL. 1988. "Sex education, contraceptive and reproductive knowledge, and contraceptive use among black adolescent females." Journal of Adolescent Research 3(2):171-187.

Seidman, S. N., Mosher, W. D., and Aral, S. D. 1994. "Predictors of high-risk behavior in unmarried american women: Adolescent environment as a risk factor." Journal of Adolescent Health 15: 126-132.

Serbin, L.A., Peters, P.L., McAffer, V.J., and Schwartzman, A.E. 1991. "Childhood aggression and withdrawal as predictors of adolescent pregnancy, early parenthood, and environmental risk for the next generation." Canadian Journal of Behaviourial Science 23(3):318-331.

Small, S. A., and Kerns, D. 1993. "Unwanted sexual activity among peers during early and middle adolescence." Journal of Marriage and the Family 55: 941-952.

Small, S. A., and Luster, T. 1994. "Adolescent sexual activity: An ecological risk-factor approach." Journal of Marriage and the Family 56: 181-192.

Smith, E.A. and Zabin, L.S. 1993. "Marital and birth expectancies of urban adolescents." Youth and Society 25(1):62-74.

Sonenstein, F.L., Pleck, J.H., and Ku, L.C. 1992b. "Cost and opportunity factors associates with pregnancy risk among adolescent males." Paper presented at the Annual Meeting of the Population Association of America, April, 30, 1992. Denver, Colorado.

Sonenstein, F.L., Pleck, J., and Ku, L. 1991b. "Levels of sexual activity among adolescent males in the United States." Family Planning Perspectives 23: 162-167.

Sonenstein, F.L., Pleck, J.H., and Ku, L. 1989b. "Missing data on the missing male: Measuring fertility and paternity behavior among young men." Paper presented at the meeting of the American Statistical Association, Washington, DC, August.

St. John and Rowe. 1990. "Adolescent background and fertility norms: Implications for racial differences in early childbearing. " Social Science Quarterly 71:152-62.

Stiffman, A.R., Powell, J., Earls, F., and Robins, L. 1990. "Pregnancies, childrearing, and mental health problems in adolescence." Youth and Society 21:483-495.

Stone, R. and Waszak, C. 1992. "Adolescent knowledge and attitudes about abortion." Family Planning Perspectives 24(2):52-57.

Taylor, J. and Ward, J. 1991. "Culture, sexuality and school: Perspectives from focus groups." Women's Studies Quarterly 19(1-2):121-137.

Thornton, A. 1990. "The courtship process and adolescent sexuality." Journal of Family Issues 11(3): 239-273. [#140]

Thornton, A., and Camburn, D. 1989. "Religious participation and adolescent sexual behavior and attitudes." Journal of Marriage and the Family 51: 641-653.

Udry, J.R. 1988. "Biological predispositions and social control in adolescent sexual behavior." American Sociological Review 53: 709-722.

Urberg, K. 1982. " A theoretical framework for studying adolescent contraceptive use." Adolescence 17:527-540.

Van Oss Marin, B., Gomez, C.A., and Hearst, N. 1993. "Multiple heterosexual partners and condom use among hispanics and non-Hispanic whites." Family Planning Perspectives 25: 170-174.

Visher, S. 1986. "The relationship of locus of control and contraception use in the adolescent population." Journal of Adolescent Health Care 7:183-186.

Voydanoff, P. and Donnelly, B.W. 1990. Adolescent Sexuality and Pregnancy. Newbury Park: Sage Publications.

Warren, K.C. and Johnson, R.W. 1989. " Family environment, affect, ambivalence, and decisions about unplanned adolescent pregnancy." Adolescence 24(95):505-522. [

Zabin, L.S. 1994b. "Addressing adolescent sexual behavior and childbearing: Self esteem or social change?" Women's Health Issues 4(2):92-97.

Zabin, L.S. 1990. "Adolescent pregnancy: The clinician's role in intervention." Journal of General Internal Medicine 5: S81-S88.

Zabin, L.S., Hirsch, M.B., and Emerson, M.R. 1989. "When urban adolescents choose abortion: Effects on education, psychological status and subsequent pregnancy." Family Planning Perspectives 21(6):248-255.

Zabin, L.S., Hirsch, M.B., Emerson, M.R., and Raymond, E. 1992. "To whom do inner-city minors talk about their pregnancies? Urban adolescents' communication with parents and parent surrogates." Family Planning Perspectives 24(4):148-154.

Zabin, L., Hirsch, M.B., Smith, E., and Hardy, J. 1984. "Adolescent Sexual Attitudes and Behavior:Are They Consistent?" Family Planning Perspectives. 16(4):181-185.

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APPENDIX A

CONCEPTUAL MODELS FOR UNDERSTANDING ADOLESCENT PREGNANCY

MODEL/RATIONALE	AUTHORS	DESCRIPTION
Jessor Theory of Problem Behavior and Adolescent Risk-Taking	Costa, F.M., Jessor, R., and Donovan, J.E. 1987.	Jessor's Theory of Problem Behavior (1977) was initially developed to account for problem behavior in youth. That is, it was intended to understand the process by which adolescents depart from "regulatory norms" and engage in deviant behavior such as illicit drug use or precocious sexual behavior. The framework tries to predict a profile of characteristics that dispose an individual to transgress these norms. The theory employs three interrelated systems: **personality, perceived environment, and behavior**. It maintains that adolescent behaviors are a function of the interaction of these systems. The personality system can be further subdivided into three additional structures: **personal belief** (encompasses beliefs about oneself in relationship to society which affects one's willingness to conform or not), **motivational-instigational** (entails the values that the individual places on salient goals), and **personal control** (involves how personal characteristics reflect moral standards). With this framework in place, the theory relies on the notion that adolescent problem behavior proneness is a result of: 1. Increased value on independence 2. Decreased value on academic achievement 3. Increased value on liberal attitudes 4. Belief that peers in the perceived environment are engaging in deviant behaviors 5. Decreased value on "religiosity"/morality Jessor presented a theme of **unconventionality versus conventionality** with the Problem Behavior Theory. Thus, in the case of teen sexual behavior, an increased emphasis on unconventionality would lead to early pregnancy. In addition, an increased focus on unconventionality might make the adolescent more likely to choose abortion as an option to resolve an unwanted pregnancy.
Theory of Reasoned Action Figure 6	Adler, N.E. 1992. Cervera, N.J. 1993.	The Theory of Reasoned Action (Ajzen and Fishbein, 1980) asserts that a person's behavior is best predicted by his or her intention to engage in the given action. That behavior is determined by the interaction of an individual's attitude toward the behavior and his or her perceptions of what other's expectations are regarding that behavior. An individual's attitude can be further subdivided into two components: beliefs about the consequences of an action and value that the person places on those consequences. Likewise, the individual's perceptions of what is accepted by others must be weighted against the value that he or she places on the societal norm. The theory is quite useful in a discussion of adolescents' motivation to prevent pregnancy because it takes into account both the teen's intra personal beliefs and the pressures of the beliefs of family and friends. It is helpful to look at belief structures when counseling this population and when designing intervention programs. For example, one can look at how the teen's standards for him or herself coupled with how he or she perceives the reaction of others to be will affect a decision to resolve an unintended pregnancy or a willingness to use contraception.

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MODEL/RATIONALE	AUTHORS	DESCRIPTION
Social Influences Model	Perry, C. and D. Murray, 1982.	This is one of the current models being used in prevention efforts around adolescent risk-taking behavior. It has traditionally been implemented in health-related campaigns such as illicit drug use prevention but could also be applied to premature teen sexual behavior and teen pregnancy. The model notes that there are three levels of risk factors that must be addressed in any primary prevention program: **environmental** (teen's social environment, social support network, and role models all provide a necessary background that foster or impede behavior) and **personality** and **behavioral** (teen's own characteristics help to determine how he or she will interact with and react to these environmental risk factors). The framework employs the **environmental influences system** and the **personal influences system** which can be represented by two concentric circles. These systems are not mutually exclusive; their interaction is key to understanding the forces that determine an adolescent's health behavior. According to this model, there are four structures of influence in the environment which affect health behavior. As in the case of Jessor's Theory of Problem Behavior, these structures can be viewed as proximal or distal in shaping the particular behavior. The most proximal influence is the **model structure**, or the behavior of significant others. That is, teens are most closely affected by the actions and attitudes of family and peers. The next most proximal influence is the **network structure.** Networks refer to the "loosely organized groups of people who interact with each regularly such as peer groups, neighborhoods and families." The third part of the environment is **social systems**. This includes the constraints and health messages that come from the larger society such as the school or the workplace. The most distant structure of influence is that of the **community message.** This sphere encompasses the general word of institutions such as the media and the government regarding acceptable health behavior. Although the environment plays a key role in determining health choices, an adolescent's personal influences must also be examined. This system consists of three structures. The **behavior repertoire** has the most direct effect on the teen. This structure refers to "the catalog of behaviors at an individual's disposal." That is, understanding the skills that the adolescent has can help to predict their reaction and response to environmental conditions. The next most proximal sphere of influence is the **perceived environment,** or how the adolescent views what others in society are doing. The teen's **personality structure** will also have a role in determining the decisions he or she makes with regard to taking or avoiding health risks. The social influences model suggests that health promotion programs should work to "re-create environments that not only change behavior but also address the function of the behavior." There are seven components in this model for primary prevention: 1. Identify short-term social consequences of behavior; 2. Explore reasons for adolescents engaging in behavior; 3. Understand that the behavior is not normative; 4. Explore how society establishes behavior; 5. Map out ways in which adolescent can resist behavior; 6. Identify how the behavior affects society at large; 7. Set up goals for future/ways in which teen can avoid behavior The framework highlights the utility of peer leaders in prevention efforts and the need for a community-wide approach in addressing adolescent risky behavior. In addition, it notes the importance of giving teens necessary life skills training so that they can gain social competence and healthy intra personal and decision-making abilities.

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MODEL/RATIONALE	AUTHORS	DESCRIPTION
Expectancy Value Theory	Namerow, P.B., Kalmuss, D.S., and Cushman, L.F. 1993.	This theory focuses on how and why an individual selects one behavioral alternative over another. It asserts that a person will select the behavior that he or she perceives will have the greatest probability of leading to outcomes that he or she desires and the lowest probability of leading to unwanted results. Therefore, the individual measures this perceived desirability against the likelihood of outcomes. In the case of teen pregnancy, many studies have utilized this theory to understand how and why adolescents choose particular alternatives in pregnancy resolution. For example, Namerow et al. (1993) applied this framework to explain why so few teens choose the adoption option.
DeLamater's Conceptual Model of Premarital Contraceptive Activity Figure 3	DuRant, 1989 DeLamater, J. 1983.	DeLamater accepts Lindemann's (1974) hypothesis that frequency of intercourse is the "prime mover" in the decision process which determines contraceptive use. Based on his own studies , he proposes that there are two major influences on coital frequency: 1) the individual's premarital standards, and 2) the emotional intimacy of the heterosexual relationship. Both of these factors are positively associated with frequency of intercourse and changes in standards or in the quality of a relationship should therefore indirectly affect contraceptive behavior, through their direct influence on coital activity. The next factor in the process to use contraception and what method is the perceived probability of pregnancy. If pregnancy is perceived as a real possibility, the next consideration is her assessment of the consequences of conceiving a child. If her assessment is positive, she is unlikely to use birth control, whereas if her assessment of the effects of pregnancy is negative she will consider contraception. Actual contraceptive activity consists of 1) the decision to not use or use, and 2) the choice of a particular method. If contraceptive use results in a generally positive experience, use will continue and coital frequency might increase. If use results in a negative experience, the woman will reassess her choice, and may switch to a different method or stop using birth control. When one component of this model changes, there should be corresponding changes in the other components. Thus, there are feedback loops built into the model. DeLamater's theory was based on work done with predominantly older white adolescents.

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MODEL/RATIONALE	AUTHORS	DESCRIPTION
DuRant's model of adolescent female contraceptive behavior Figure 4	Durant, R.H., Jay, S., and Seymore, C. 1990a.	This model suggests a series of direct and interactive associations between variables leading to the prediction of four highly interrelated forms of contraceptive behavior: the decision to use birth control, choice of contraceptive method, contraceptive compliance, and contraceptive method switching. The frequency of sexual intercourse has been proposed as the initiator variable in the adolescent's decision process to use or not use contraception. As the frequency of intercourse increases, the female becomes more aware of the possibility of pregnancy, which is directly associated with her likelihood of using birth control. Coital frequency is largely influenced by two factors: the individual's premarital experiences and standards, and the emotional intimacy of the heterosexual relationship. In general, congruence between the adolescent's premarital sexual standards and actual sexual behavior must occur before sexual frequency will increase to the level at which she will purposefully consider the risk of pregnancy. Resolution of the incongruence between sexual values and behavior often occurs over time after establishing a monogamous heterosexual relationship. The model propositions are based on the assumption that when unmarried female adolescents first become sexually active they do not accept their identity as a sexually active person. Establishing a monogamous relationship provides a rationale for coitus, creating a congruence between premarital sexual standards and behavior, and leading to increased acceptance of continuing coitus. With this change in sexual identity, the frequency of intercourse should increase resulting in a heightened awareness of the possibility of pregnancy. However, even if a female adolescent perceives that she is at risk for pregnancy due to unprotected intercourse, she will not take action to avoid it if she does not believe that pregnancy would be a negative experience.
Health Belief Model Figure 5	Keith, J.B., McCreary, C., Collins, K., Smith, C.P., and Bernstein, I. 1991.	A social-psychological model consisting of three broad and mutually interacting determinants of contraception and continuation: 1) The perceived "threat" of pregnancy, 2) modifying and enabling factors, and 3) probability of contraceptive use. The perceived threat of pregnancy is a function of motivations, including educational and occupational goals; the perceived probability of pregnancy, including knowledge; and the perceived consequences of pregnancy. Modifying and enabling factors include psychological factors such as time orientation and locus of control; attitudes, such as those regarding religion; and interpersonal factors, such as social support. The probability of contraceptive use involves both the benefits of contraception, such as belief in its effectiveness, and barriers to contraception, such as its inconvenience, side effects, and provider characteristics. The model offers a systematic framework for examining the multiple factors explaining contraceptive adoption and continuation among unmarried young women. (For more info: Nathanson and Becker, 1983; Maiman and Becker, 1974; Rosenstock, 1974, 1977.) In this particular study, which used the model to develop a questionnaire, the cognitive processing of experience and information is considered to act as a filter which affects all other components.
Luker Model Figure 1	Philliber, S. and Namerow, P.B. 1990.	Luker's theory focuses on the individual coital act. She says that women consciously or unconsciously assign advantages and disadvantages to contraceptive use and pregnancy. This constitutes a cost-benefit set which affects the likelihood that a woman will risk pregnancy. She also asserts that women assign a subjective probability to the possibility of pregnancy and if it's low, risk taking is more likely. She suggests that women assign a probability to reversing any pregnancy that may occur, so that if a woman feels an abortion would be more easily obtainable she would be more likely to take a pregnancy risk. She proposes that any of these "calculations" may be affected by stressful life events. (For more we need: Luker K. (1975). Taking Chances. Los Angeles: University of California Press.) This model suggests that the theoretical and empirical task is not identification of risk takers, but the identification of factors that lead to risk taking. This model may explain how a well-informed adolescent may fail to use a method of birth control.

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MODEL/RATIONALE	AUTHORS	DESCRIPTION
A conceptual model for how the strength of a community's child support enforcement program may influence young mens' sexual behavior Figure 7	Sonenstein, F.L., Pleck, J.H., and Ku, L. 1994.	The authors conceptualize two ways that strong child support programs may influence sexual behavior: 1) Stronger programs, those where more non-custodial fathers are paying child support, can influence this behavior by raising young men's understanding or knowledge about their legal obligations if they father a child. This learning occurs because there is a greater probability that the young man will have observed other males being held responsible for their children. Greater knowledge about obligations may lead to young men perceiving higher costs associated with childbearing because they are more likely to anticipate having to support a child. Thus males in these counties will be more careful about getting their unmarried partners pregnant; they will have fewer instances of unprotected sexual intercourse and they will report fewer pregnancies. 2)Stronger programs may also signal and reinforce shared community expectations that non-marital childbearing should be discouraged. In communities with these normative expectations males will perceive disapproval from their peers, their parents, and other important reference groups, for non-marital pregnancies. As a result, they are expected to be more careful about getting their unmarried partners pregnant; they will have fewer instances of unprotected intercourse and they will report fewer pregnancies. Because the authors thought that counties with strong child support programs might also have an ethic of good citizenship and that this ethic might lead to less risky behavior by the teens, they included two control measures: proportion of registered voters voting in the last election in the county and the crime rate.
A Theoretical Framework for Studying Adolescent Contraceptive Use Figure 2	K.A. Urberg. 1982.	This theory views remaining nonpregnant as a problem that must be solved by the sexually active person. Thus, the problem-solving framework that the author uses involves the following 5 aspects, adapted from problem-solving literature and based on the Cognitive Developmental Theory derived from Piaget's work: 1. The potential contraceptor must recognize that there is a problem to be solved. Meaning, the person must recognize that pregnancy is likely if an adequate method of contraception is not employed. Three important variables for problem recognition are: a. The person must have a self-concept congruent with behavior b. They must have cognitive skills adequate enough to understand the facts of reproductive physiology c. They must have accurate knowledge about sexuality and contraception. 2. The person must be motivated to do something about the problem. This includes the belief that he or she can do something effective about the problem. Three important variables are: a. The persons at risk of pregnancy must feel vulnerable to pregnancy. b. They must believe they can do something about the problem (locus of control). c. The person must value or perceive the outcome (pregnancy) as negative. 3. The person must be able to generate possible solutions to the problem. 4. These possible solutions must be evaluated and one chosen. 5. The chosen solution must be implemented. The following factors enable a person to overcome internal and external barriers to contraceptive use: a. Assertiveness b. Role-taking skills c. Means/ends thinking

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MODEL/RATIONALE	AUTHORS	DESCRIPTION
Rains' Model of Premarital Contraceptive Use	DeLamater, J. and MacCorquodale, P. 1978.	This was the first model specifically designed to explain the contraceptive behavior of single women. The model specifies the presence or absence of "moral ambivalence" regarding sexual activity as the major determinant of contraceptive activity. Young women who are ambivalent about their sexuality, who engage in intercourse but are unable to accept it as right for them will be nonusers or inconsistent users of birth control. Women who accept sexual activity will be more likely to use contraceptives. She suggests four stages which are involved as a young woman moves from virgin to sexually active contraceptive user: 1. Falling in love, which proved a rationale for sexual intimacy. 2. Dating one male exclusively, which implies a stable relationship over time. 3. Changing her sexual standard, so that she accepts intercourse for herself. 4. Coming to perceive herself as likely to engage in sexual activity in future heterosexual relationships. These stages may occur in various orders or simultaneously, but Rains argues that it is the fourth which is most likely to produce consistent contraceptive use.
Reiss' Model of Female Contraceptive Use	DeLamater, J. And MacCorquodale, P. 1978.	This model's general proposition is that the acceptance of one's own sexuality is the fundamental process: "the likelihood of utilizing contraception premaritally is dependent on the basic sexual life style of an individual." In addition, the following five factors are predicted to positively influence the adoption of a birth control method: 1. Endorsement of sexual choices 2. Self-assurance 3. Early information about sexuality 4. Congruity of premarital sexual standards and activity 5. Degree of dyadic commitment
Opportunity costs; perception of opportunity	Farber, N.B. 1991. Robbins, C. 1991. Namerow, P.B., Kalmuss, D.S., and Cushman, L.F. 1993.	The "opportunity cost" hypothesis holds that a teen's decisions about a pregnancy are based primarily on her perception of what she gains or loses in future achievement by carrying the child to term or by choosing another alternative. The theory is intended to rationalize the adolescent pregnancy resolution decision-making process and provides a framework to understand why some teens are at a greater risk for out-of-wedlock childbearing. It follows that a youth with a "promising future," or greater opportunities to achieve career goals, will be more motivated to avoid pregnancy and parenthood. On the other hand, an adolescent who has less opportunities (economic/academic) will feel more "powerless" about the future and may be less likely to take measures to prevent pregnancy such as seeking out family planning services and utilizing effective contraception. Thus, teens will delay parenthood to the extent that it impedes their own life aspirations.

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RATIONALES FOR ADOLESCENTS' MOTIVATION TO PREVENT PREGNANCY

MODEL/RATIONALE	AUTHORS	DESCRIPTION
Subjective expected utility of adolescent sexual behavior (Bauman&Udry)	Pleck, J.H., Sonenstein, F.L., and Ku, L. 1990.	Bauman and Udry created this theory to parallel Ajzen and Fishbein's Theory of Reasoned Action and to help explain teen sexual behavior. They hold that a measure of the "subjective expected utility of sexual activity is a strong correlate of sexual activity in cross-sectional data and predicts sexual activity longitudinally." This measure is assessed by rating the probabilities of various consequences of having sex and evaluating these consequences. For example, Pleck et al. (1990) used this model to test the hypothesis that male contraceptive attitudes can be operationalized by condom utility and male responsibility and is positively associated with their intention to use condoms at next intercourse.
Clinic attendance as a proxy for motivation to prevent pregnancy -- reasons for delay may be reasons for diminished motivation	Zabin, L.S. 1990. Zabin, L.S., Hirsch, M.B., Emerson, M.R., and Raymond, E. 1992.	According to recent studies, the majority of teens do not plan ahead and attend a family planning clinic for contraception or counseling services prior to initial coitus. In fact, the mean delay for attendance following initial sexual activity is sixteen months. The main reason for a visit is triggered by a need for a pregnancy test. The reasons for long delays are numerous. According to one Zabin study, the top four reasons that adolescents cite for not seeking out contraceptive services are: 1. General procrastination 2. Fear that family would find out 3. Issues around the relationship with partner 4. Fear of the exam/process of the visit It can be postulated, therefore, that many of the reasons for an adolescent's delay in clinic attendance is related to a lack of motivation to prevent pregnancy. According to Zabin, the teens would benefit from more assurance of their confidentiality at a clinic and help in dealing with ambivalence around sexual behavior and their own sexual development. This could greatly improve their ability and motivation to prevent pregnancy.
Gender Role Norms	Marsiglio, W. and Menaghan, E.G. 1990.	This theory posits that gender role norms (perception of what are appropriate roles and behaviors for men and women in society) will contribute to a greater sense of parental responsibility among young women relative to men. In addition, it has been used to understand how gender is related to what decisions the teen makes in the pregnancy resolution process. Marsiglio and Menaghan (1990) found that teen males and females both preferred adoption and abortion in handling their own pregnancies. However, females were more likely to choose arrangements that involved living with their child as opposed to single custodial parenting which was more favorable to males. The theory of gender has been criticized for being too focused on popular culture assumptions about males (IE. stereotyped as irresponsible and uninterested in their children) and current typical child custody outcomes where the mother is left caring for the child.

MODEL/RATIONALE	AUTHORS	DESCRIPTION
Procreative consciousness and procreative responsibility	Marsiglio, W. 1993.	*Procreative consciousness*: Refers to men's subjective experiences of the reproductive realm, including cognitive and emotional aspects that are largely distinct from men's expectations or sense of obligation. One important aspect of men's procreative consciousness is the extent to which their views and experiences of fecundity and paternity are associated with their image of their own masculinity and of being a competent sexual partner. Recent research does not address how important fecundity is to young men's sense of self, nor do they clarify the extent to which men rely on paternity to prove their masculinity. (For more see: W. Marsiglio, "Male Procreative consciousness and responsibility: a conceptual analysis and research agenda," Journal of Family Issues, 12:268, 1991) *Procreative responsibility*: Encompasses men's involvement and sense of obligation regarding contraception, pregnancy resolution, and child support and care. Two key aspects of procreative responsibility relevant to Marsiglio's study were young men's attitudes toward sharing contraceptive responsibility with their partner, and their sense of responsibility to their children. Men's perceptions about paternity and obligations to a partner and child during pregnancy and birth may be important predictors of young men's sexual and contraceptive risk-taking behavior and their financial commitment to their children, in addition to dimensions of social class, race or ethnicity and views about male gender roles.
Costs-benefits of condom use for adolescent males	Pleck, J.H., Sonenstein, F.L., and Ku, L.C. 1991.	The authors hypothesize that using condoms consistently is associated with adolescent males' perceptions of the costs-benefits of condom use regarding: a)personal costs-benefits of preventing pregnancy, b) a normative belief in preventing pregnancy, c) avoiding AIDS, d) partner expectations, and e) embarrassment and reduction of pleasure. These hypothesized associations are based on previous studies. The influence of personal costs-benefits of preventing pregnancy is based on research finding that condom use was lower when the hypothetical context was that the female was using the pill. The influence of the normative belief in preventing pregnancy is based on research finding that males who endorsed sole male responsibility for contraception were more likely to have used a condom at last intercourse. A male's level of worry about getting AIDS and his perceived risk of acquiring it have been found to predict consistent use. Embarrassment and reduction of pleasure are perceived as costs of condom use. Research has found that consistent condom use is associated with believing that condoms reduce sexual pleasure relatively little and that it is not embarrassing to use them.

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MODEL/RATIONALE	AUTHORS	DESCRIPTION
Attitude-behavior consistency in relation to contraceptive use- Relative Contraceptive Utility	Jaccard, J. Helbig, D., Wan, C.K., Gutman, M., and Kritz-Silverstein, D. 1990.	The purpose of these authors' study was to design research which sought insights into the consistent use of birth control and, on a more theoretical level, explored individual differences in attitude-behavior consistency. They draw upon the Luker and Fishbein models, but modify them so that they may be more applicable to multiple act behaviors (e.g. several sexual acts). They focus the development of their model on Fishbein's approach and the moderator approach (Snyder and Kendzierski). Thus, this paper's conceptual model is concerned with a) attitudinal variables, and b) moderator variables, with respect to predicting consistency of birth control usage. The attitudinal variables chosen were a) the attitude toward the current contraceptive method and b) the attitude toward becoming pregnant, drawn from Luker and Fishbein frameworks. Based on expected-utility models, subjective-expected-utility theories, social learning analyses, and attitude-based decision models, the authors defined a "relative contraceptive utility (RCU)" as the difference between a and b. As this study looked at the diaphragm, a highly positive RCU score would reflect women who have a relatively positive attitude toward the diaphragm and a relatively negative attitude toward becoming pregnant. A low RCU score would reflect women who have a relatively negative attitude toward the diaphragm and a relatively less negative attitude toward becoming pregnant. Based on the moderator approach, the authors expect that the strength of the relationship between the attitudinal variables and use consistency will be moderated by certain variables, specifically: susceptibility to pregnancy; contraceptive locus of control; partner variables: partner's attitude toward the diaphragm, partner's willingness to postpone sex if bc is not available, and how independent the woman is of her partner; sexual interest and arousal (a widely held view is that a generally positive orientation toward sexuality, including awareness and acceptance of self as being sexually active, is an important precondition for obtaining and using contraceptives); life events; alcohol consumption; interest in romantic sex.

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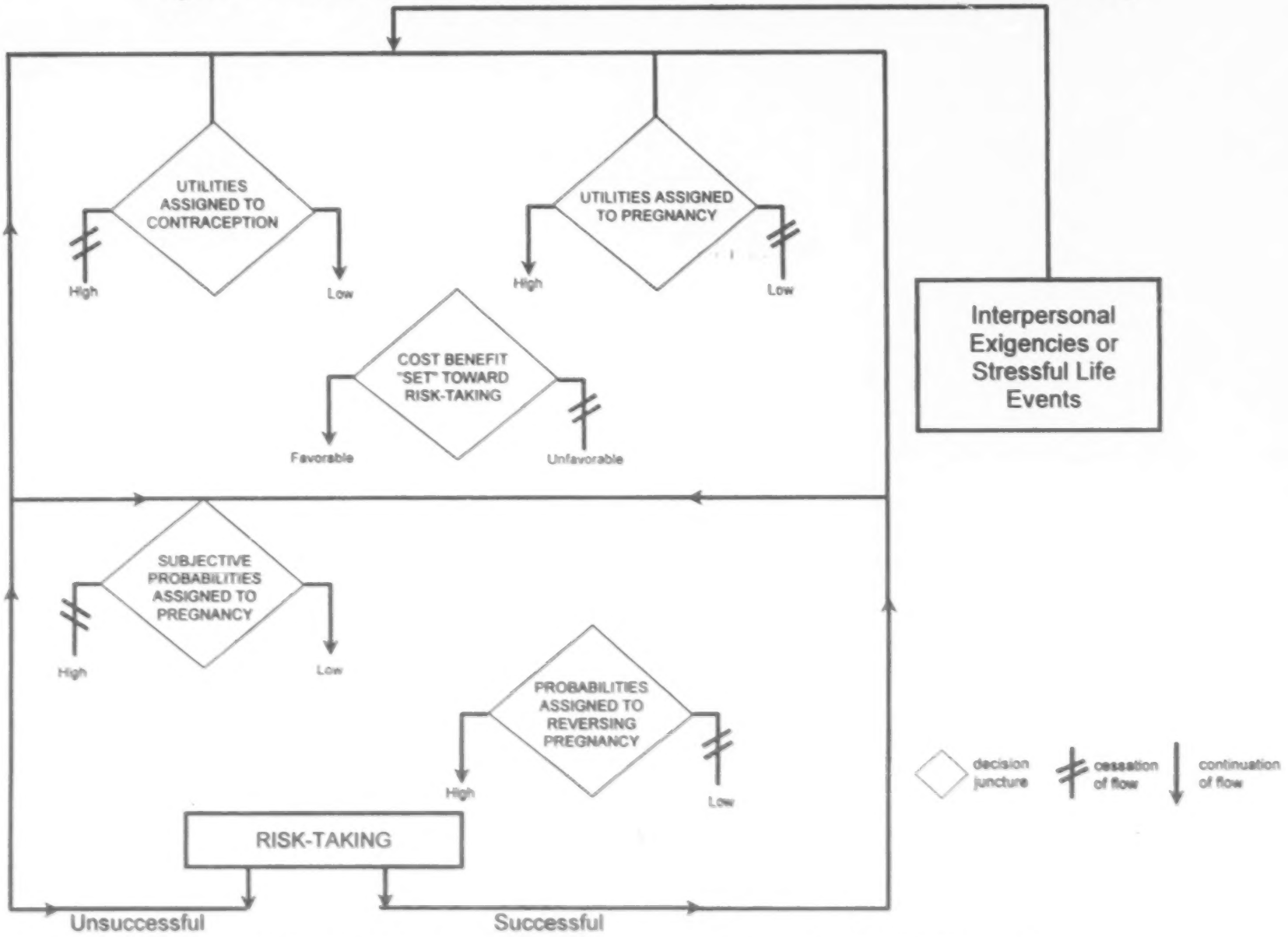
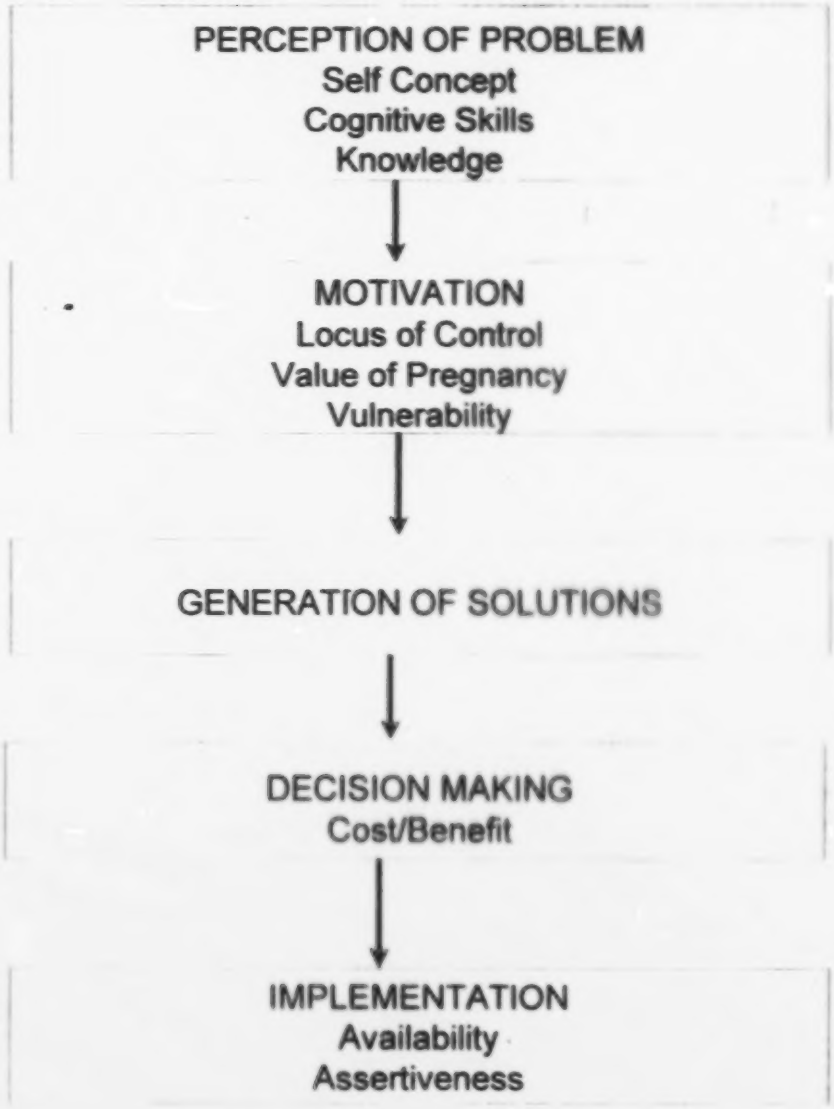
Figure 1: The Luker Cost-Benefit Model of Pregnancy Risk Taking



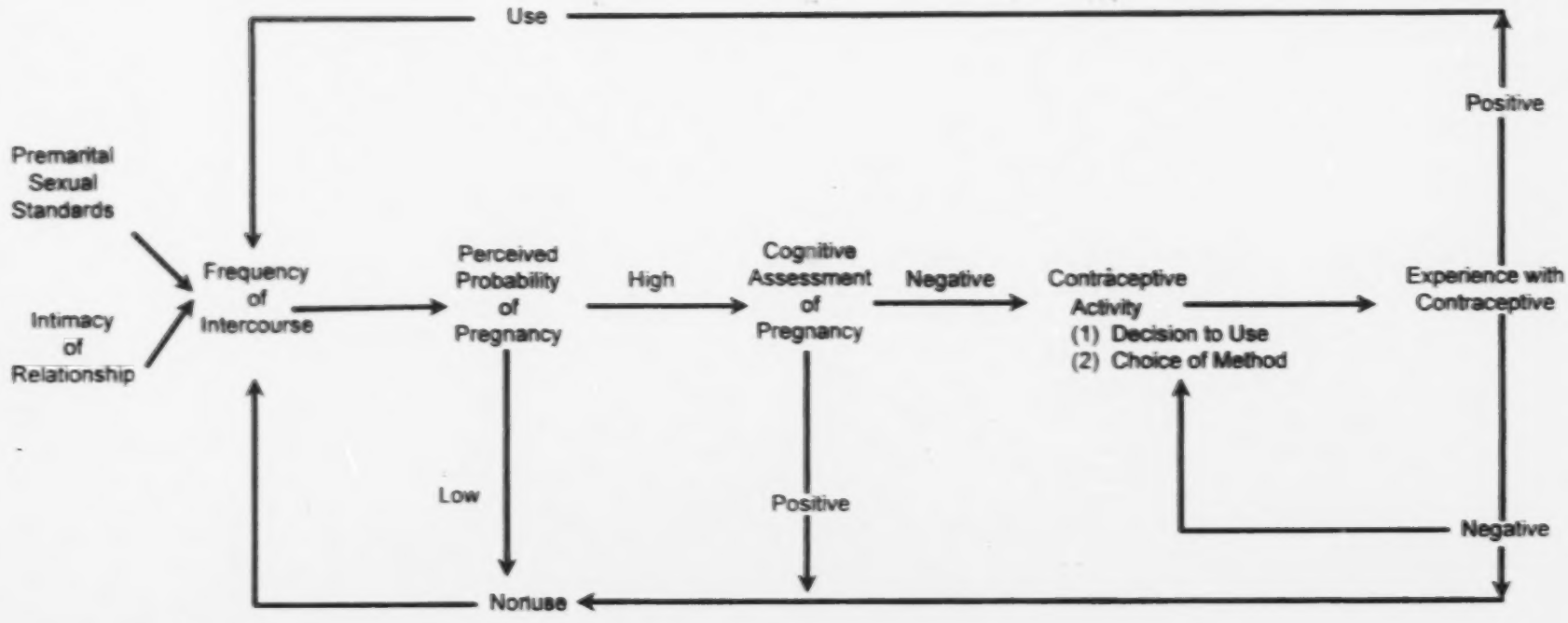
Source: Adapted from Kristin Luker (1975). Taking chances. Los Angeles: University of California Press

Figure 2: A Theoretical Framework for Studying Adolescent Contraceptive Use



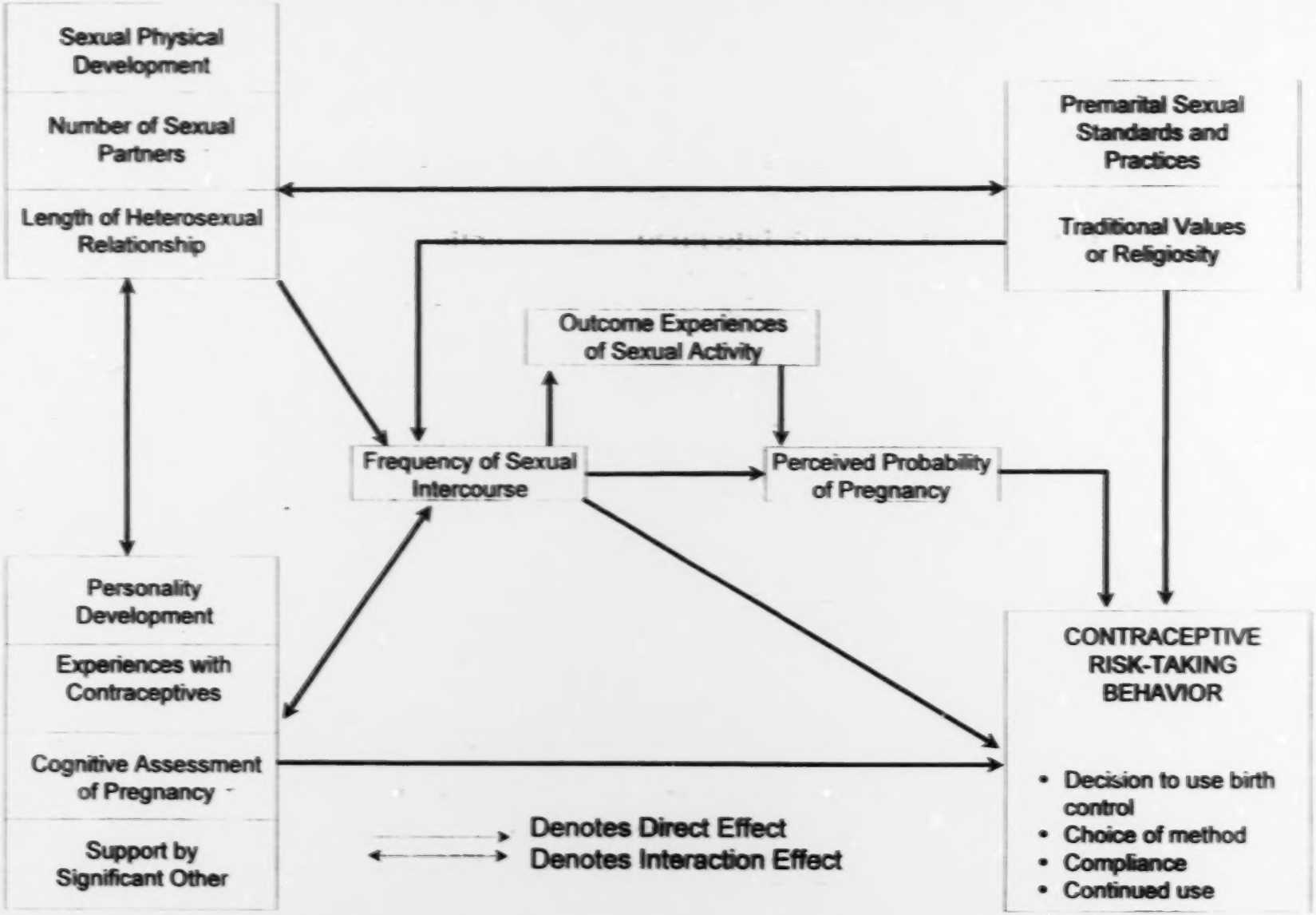
Source: Urberg, K.A., "Adolescence", Vol. XVII No. 67, Fall 1982, Libra Publishers, Inc., 391 Willets Rd., Roslyn Hts., NY 11577

Figure 3: DeLamater's Conceptual Model of Premarital Contraceptive Activity



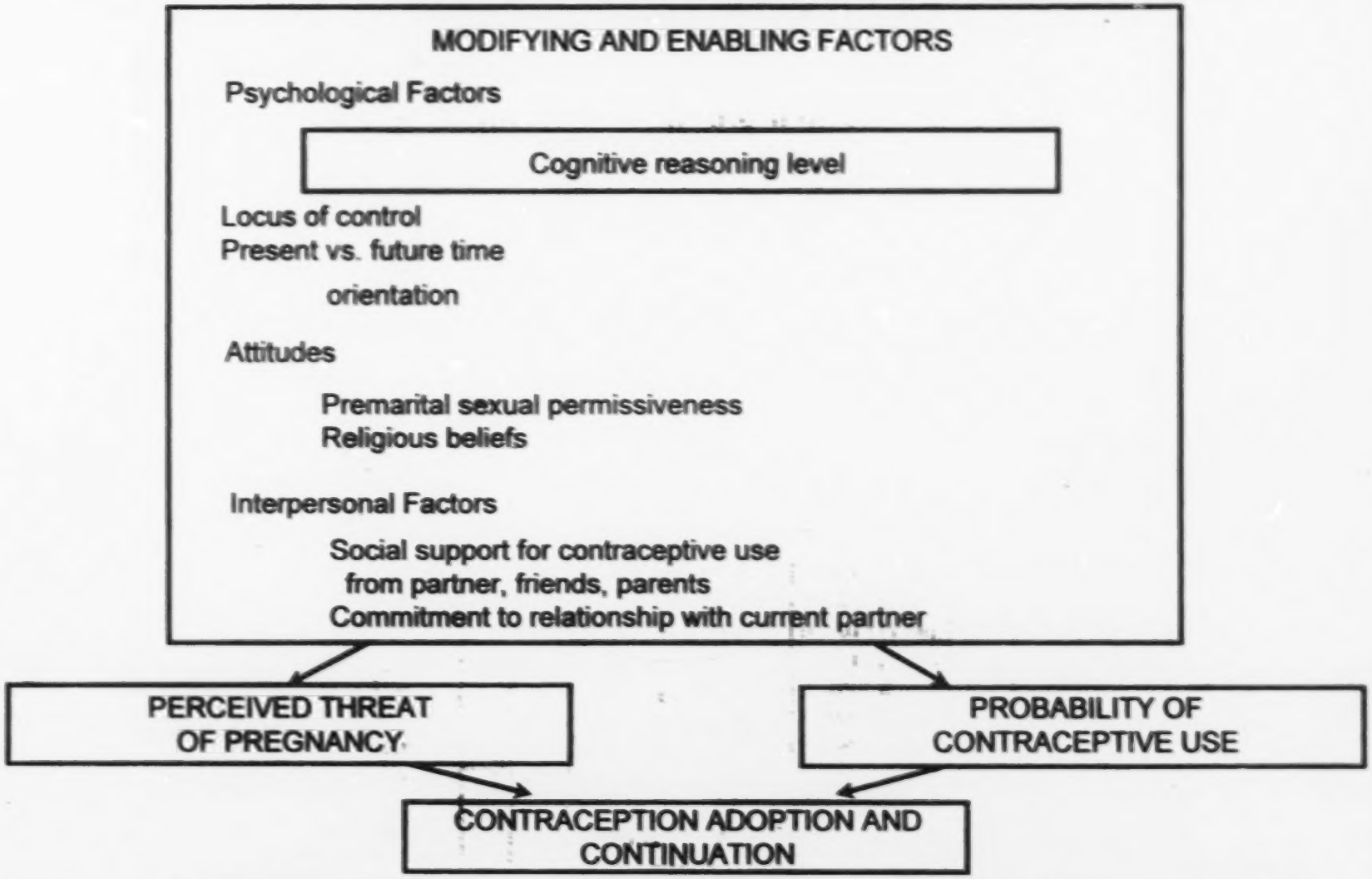
Source: DeLamater, J. (1983). An intrapersonal and interactional model of contraceptive behavior. In: Byrne, D. Fisher, W.A., (Eds.). Adolescents, Sex, and Contraception. Hillsdale, J.J.: Lawrence Erlbaum Associates, pp. 33-48.

Figure 4: A Model of Adolescent Contraceptive Behavior



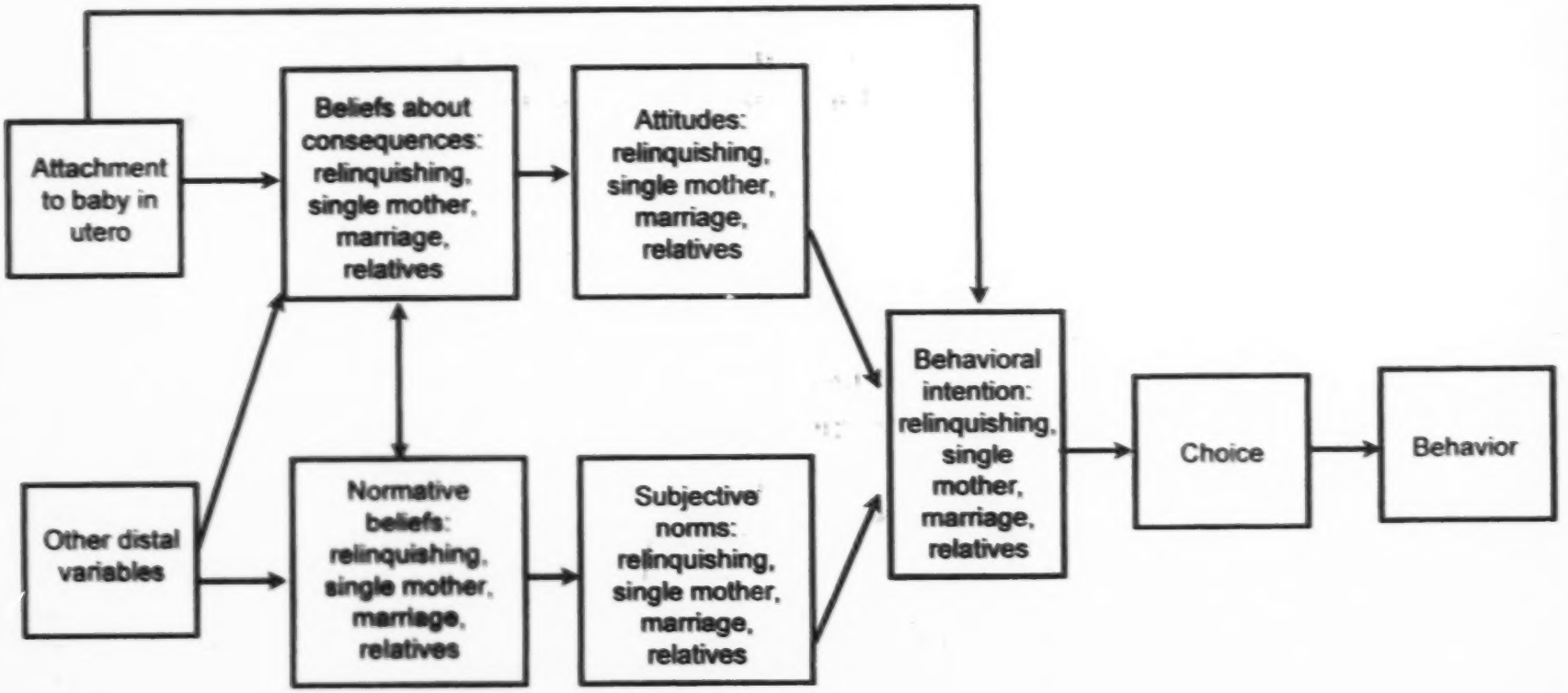
Source: Durant, R.H., Jay, S., and Seymore, C. 1990a. "Contraceptive and sexual behavior of black female adolescents." Journal of Adolescent Health Care.

Figure 5: Psychosocial Model for Understanding Unmarried Young Women's Adoption and Continued Use of Contraception (A modification of Nathanson and Becker's 1983 model).



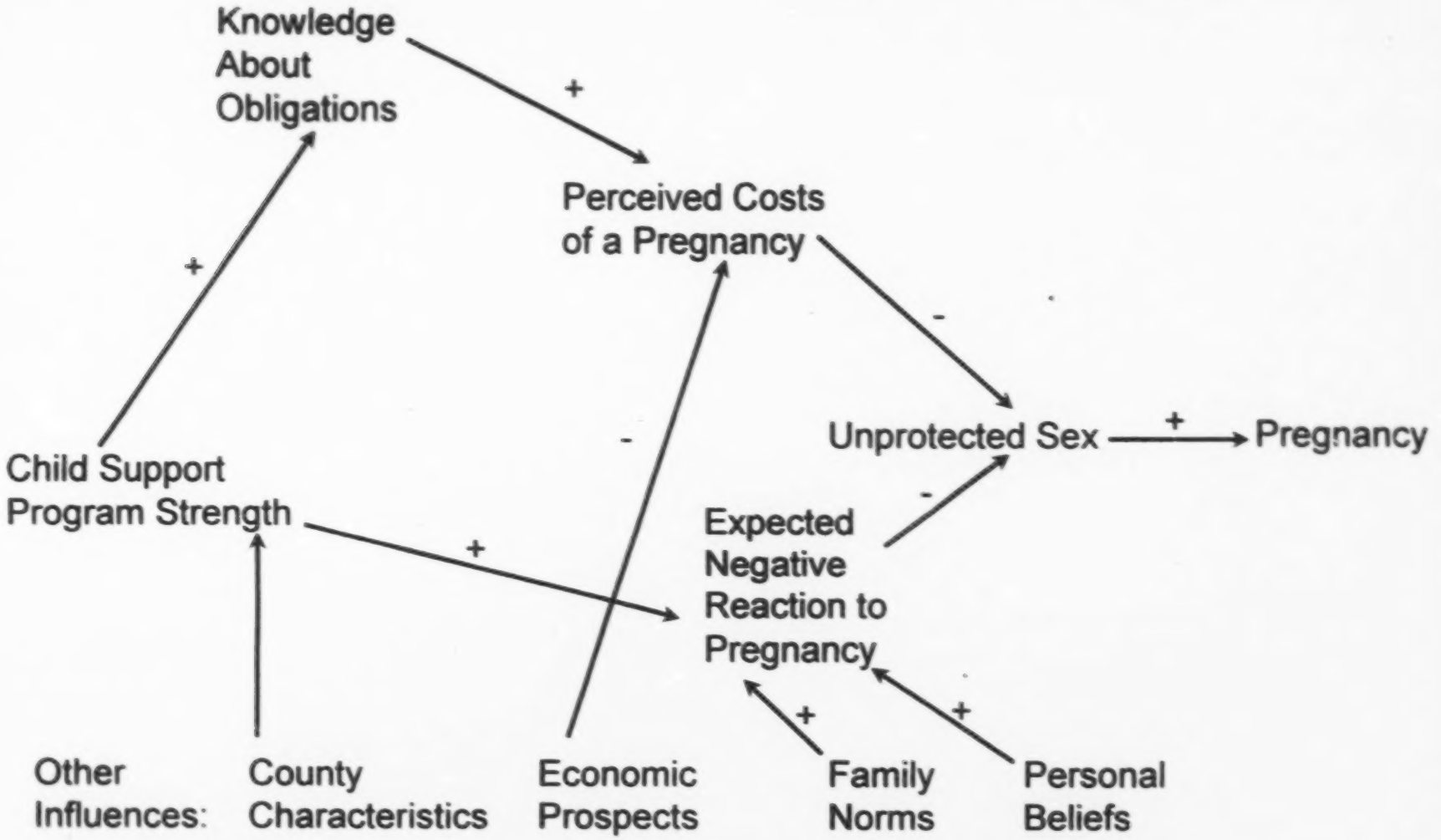
Source: Keith, J.B., McCreary, C., Collins, K., Smith, C.P., and Bernstein, I. 1991. "Sexual activity and contraceptive use among low income urban black adolescent females." Adolescence 20: 769-780.

Figure 6: Decision making for pregnant teens: Application of the Theory of Reasoned Action


Attachment to baby in utero
Beliefs about consequences: relinquishing, single mother, marriage, relatives
Attitudes: relinquishing, single mother, marriage, relatives
Other distal variables
Normative beliefs: relinquishing, single mother, marriage, relatives
Subjective norms: relinquishing, single mother, marriage, relatives
Behavioral intention: relinquishing, single mother, marriage, relatives
Choice
Behavior

Source: Cervera, N.J. 1993. "Decision making for pregnant adolescents: Applying reasoned action theory to research and treatment." Families in Society 74(6):355-365.

Figure 7: A Conceptual Model for How the Strength of a County's Child Support Program May Influence the Sexual Behavior of Young Men



Source: Sonenstein, F.L., Pleck, J.H., and Ku, L. 1994. "Child support obligations and young men's contraceptive behavior: What do young men know? Does it matter?" Paper presented at the Annual Meeting of the Population Association of American, Miami, FL, May.

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